



MCFARLAND CITY COUNCIL

Regular Meeting Notice and Agenda

Council Chambers
103 W. Sherwood Ave, McFarland, CA
Website: <https://www.mcfarlandcity.org/>

Thursday, August 8, 2024
6:00 PM

SAUL AYON, *Mayor*
RICARDO CANO, *Vice Mayor*
AMADOR AYON, *Council Member*
ANITA GONZALEZ, *Council Member*
MARIA PEREZ, *Council Member*

VIEW THE MEETING RECORDINGS ONLINE at www.mcfarlandcity.org/AgendaCenter Recordings will be available approximately one week following the meeting.

HOW TO SUBMIT PUBLIC COMMENTS: The meetings of the City Council and all municipal entities, commissions, and boards (“the City”) are open to the public. At regularly scheduled meetings, members of the public may address the city on any item listed on the agenda, or on any non-listed matter over which the city has jurisdiction. At special or emergency meetings, members of the public may only address the city on items listed on the agenda. There is a time limitation of two minutes per person. For any item that is not on the agenda and within the jurisdiction or interest of the city, please come to the podium at this time. The Brown Act does not permit any action or discussion on items not listed on the agenda. If you wish to speak regarding a scheduled agenda item, please come to the podium when the item number and subject matter are announced, and the mayor opens Public Comment on the item. When recognized, please begin by providing your name and address for the record (optional). Anyone wishing to submit written information at the meeting needs to furnish ten (10) copies to the City Clerk in advance to allow for distribution to City Council, staff, and the media. Willful disruption of the meeting shall not be permitted. If the Mayor finds that there is in fact willful disruption of any City Council Meeting, he/she may order the disrupting parties out of the room and subsequently conduct the City’s business without them present.

PUBLIC ACCOMMODATIONS: The City of McFarland does not discriminate based on disability and complies with the provisions of the Americans with Disabilities Act (ADA). If you need special assistance to participate in this meeting, please contact the City Clerk’s Office at (661) 792-3091 at least 48 hours prior to the meeting to make reasonable arrangements to ensure accessibility to this meeting.

INTERPRETATION: If you need an interpretation of your communications to the City Council into English, please contact the City Clerk Department at 661-792-3091 ext. 2135 at least 48 hours prior to the meeting.

CALL TO ORDER: Mayor Saul Ayon

ROLL CALL:

Mayor/Chair, Saul Ayon

Vice Mayor/Vice-Chair, Ricardo Cano

Council Member/Board Member, Amador Ayon

Council Member/Board Member, Anita Gonzalez

Council Member/Board Member, Maria T. Pérez

INVOCATION: Council Member Maria Perez

PLEDGE OF ALLEGIANCE**FEATURED PET:**

Is a feature that highlights a pet available for adoption from the McFarland Animal Shelter.

- Kennel Card: Sean

PRESENTATIONS, INTRODUCTIONS AND AWARDS

1. Introduction of New City Employees
2. Fire Update: Kern County Fire & Central Valley Almond Association
3. Presentation of Sewer Master Plan

PUBLIC COMMENT: The public may address the Council/Board Member on items, which do not appear on the agenda. Council/Board Members may respond briefly to statements made or questions posed. They may ask a question for clarification; may refer the item to staff for further study or for placement on a future agenda. Speakers are limited to two minutes for each person. Please state your name and address for the record prior to making a presentation. Fifteen minutes total will be allowed for any one subject.

COUNCIL COMMENTS**DEPARTMENTAL REPORTS**

CONSENT AGENDA: The Consent Agenda consists of items that in staff's opinion are routine and non-controversial. These items are approved in one motion unless a Council Member/ Board Member or Member from the Public requests to remove a particular item.

4. Approval of Expense Report in the Amount of \$1,060,803.30 from 7/13/2024 to 7/26/2024.
5. Approval of Payroll Report for the Month of July 2024 in the Amount of \$341,675.39.
6. Second reading, by title only, and adopt Ordinance 6-2024 AN ORDINANCE OF THE CITY OF MCFARLAND AMENDING THE MCFARLAND MUNICIPAL CODE CHAPTER 2.04.101 RELATING TO CITY COUNCIL MEETINGS
7. APPROVAL OF TRAVEL AND TRAINING EXPENSES EXCEEDING \$500.00 PER TRIP FOR THE K-9 POLICE OFFICER TO ATTEND THE K-9 POLICE AND MILITARY WORKING DOG CONFERENCE ON SEPTEMBER 10-12, 2024, IN NASHVILLE, TENNESSEE AND FOR THE CHIEF OF POLICE TO ATTEND THE KERN CHIEF'S CONFERENCE ON SEPTEMBER 3, 2024, IN PISMO, CALIFORNIA.
8. Receive and File Sewer Collection Master Plan

PUBLIC HEARINGS

9. Introduce, by title only Ordinance 11-2024, AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MCFARLAND AMENDING CHAPTER 5.04 OF THE MCFARLAND MUNICIPAL CODE RELATING TO BUSINESS LICENSES

ADMINISTRATIVE AGENDA

REPORTS FROM CITY COUNCIL ON COMMITTEE/SPECIAL DISTRICT MEETINGS

- a. Kern Council of Governments (KCOG)
- b. Kern Economic Development Corp. (KEDC)
- c. Kern Local Agency Formation Commission (LAFCO)
- d. Delano Mosquito Abatement District (DMAD)
- e. Poso Creek (IRWMP)
- f. San Joaquin Valley Air Pollution Control District (SJV)
- g. Public Policy and Finance Committee
- h. Public Safety Committee

COUNCIL STATEMENTS AND REPORTS:

On their own initiative, Council Members may make a brief announcement or a brief report on their own activities. In addition, Council Members may ask a question of staff or the public for clarification on any matter, provide a reference to staff or other resources for information. Alternatively, request staff to report to the City Council at a later meeting concerning any matter. Furthermore, the City Council, or any member thereof, may take action to direct staff to place a matter of business on a future agenda.

CLOSED SESSION

ADJOURNMENT

This is to certify this agenda was posted at McFarland City Hall on August 5, 2024



Paul M. Saldana, Interim City Clerk



Diego Viramontes, City Manager

Next Meeting: Regular City Council August 22, 2024

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the Americans with Disabilities Act (ADA). If you need special assistance to participate in this meeting, please contact the City Clerk's Office at (661) 792-3091 at least 48 hours prior to the meeting to make reasonable arrangements to ensure accessibility to this meeting. Special meeting needs hour change

All agenda item and/or supporting documentation is available for public review on the city website at www.mcfarlandcity.org and the office of the City Clerk of the City of McFarland, at 401 W, Kern Ave. McFarland, CA 93250 during regular business hours of 8:00 am – 5:00 pm Monday through Friday, following the posting of the agenda. Any supporting documentation related to an agenda item for an open session of any regular meeting that is distributed after the agenda is posted and prior to the meeting will also be available for review at the same location and available at the meeting.

MCFARLAND POLICE DEPARTMENT: ANIMAL CONTROL OFFICE

12941 Melcher Road, McFarland, CA. 93250

Phone: (661) 792-2121



KENNEL IDENTIFICATION CARD



SEAN

NOTES: Sean is a very playful dog. He has a lot of energy and loves to play with water. He is leash friendly and is looking for a forever home.

Panacur: 12/20, 12/21, 12/22



Intake ID:	221219-0001
Breed:	Pit Mix
Color:	Black/Brown
Sex:	Male
Age:	2-3 yrs
Weight:	50 lbs.
Chip/Tag:	None
Collar Type:	None
Arrival Date:	12/22/2022
Arrival Reason:	Abandoned
Brought in by:	ACO Rivera
Status:	Available
Location of Impound:	Abandoned at Shelter
Available Date:	12/22/2022
DAPP Vaccine:	12/19/2022
Stickers Here:	





City of McFarland, CA

Expense Approval Report

By Vendor Name

Payment Dates 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
Vendor: American Fidelity - American Fidelity					
American Fidelity	INV0027618	07/25/2024	American Fidelity Accident 1	01-22800-0000-1	19.34
American Fidelity	INV0027619	07/25/2024	Life 1	01-22900-0000-1	9.81
American Fidelity	INV0027620	07/25/2024	American Fidelity - Disability I...	01-22700-0000-1	148.58
American Fidelity	INV0027621	07/25/2024	Life 1	01-22900-0000-1	35.07
American Fidelity	INV0027622	07/25/2024	Life 2	01-22900-0000-1	24.00
American Fidelity	INV0027634	07/25/2024	Cancer 1 American Fidelity	01-22950-0000-1	13.53
American Fidelity	INV0027643	07/25/2024	American Fidelity Accident 2* ...	30-22800-0000-1	27.45
American Fidelity	INV0027643	07/25/2024	American Fidelity Accident 2* ...	34-22800-0000-1	15.41
American Fidelity	INV0027644	07/25/2024	Life 1	34-22900-0000-1	9.81
American Fidelity	INV0027645	07/25/2024	American Fidelity - Disability I...	01-22700-0000-1	23.94
American Fidelity	INV0027645	07/25/2024	American Fidelity - Disability I...	30-22700-0000-1	35.69
American Fidelity	INV0027645	07/25/2024	American Fidelity - Disability I...	31-22700-0000-1	11.64
American Fidelity	INV0027645	07/25/2024	American Fidelity - Disability I...	32-22700-0000-1	14.31
American Fidelity	INV0027645	07/25/2024	American Fidelity - Disability I...	34-22700-0000-1	30.76
American Fidelity	INV0027646	07/25/2024	Health FSA	01-22600-0000-1	19.23
American Fidelity	INV0027647	07/25/2024	Life 1	01-22900-0000-1	21.01
American Fidelity	INV0027647	07/25/2024	Life 1	20-22900-0000-1	6.33
American Fidelity	INV0027647	07/25/2024	Life 1	30-22900-0000-1	35.80
American Fidelity	INV0027647	07/25/2024	Life 1	31-22900-0000-1	8.10
American Fidelity	INV0027647	07/25/2024	Life 1	32-22900-0000-1	9.02
American Fidelity	INV0027647	07/25/2024	Life 1	34-22900-0000-1	34.33
American Fidelity	INV0027648	07/25/2024	Life 2	34-22900-0000-1	13.85
American Fidelity	INV0027660	07/25/2024	Cancer 1 American Fidelity	34-22950-0000-1	8.12
American Fidelity	INV0027661	07/25/2024	Cancer 2* - American Fidelity ...	34-22950-0000-1	16.65
Vendor American Fidelity - American Fidelity Total:					591.78
Vendor: American Office Solu - American Office Solutions, LLC					
American Office Solutions, LLC	INV 22709	07/23/2024	INV 22709 City of McFarland ...	01-310-52200-0000-1	3,600.00
American Office Solutions, LLC	INV 22889	07/23/2024	INV 22889 EWaste Fee MPD Ti...	01-310-52200-0000-1	244.22
American Office Solutions, LLC	INV 22921	07/23/2024	INV 22921 MPD Ticket Mileage..	01-310-52200-0000-1	100.00
American Office Solutions, LLC	INV 22959	07/23/2024	INV 22959 Monthly Contract ...	01-310-52200-0000-1	3,600.00
Vendor American Office Solu - American Office Solutions, LLC Total:					7,544.22
Vendor: Arredondo Automotive - Arredondo Automotive Group					
Arredondo Automotive Group	Inv. 292811	07/23/2024	Inv. 292811 Animal Control F3...	01-155-56600-0000-1	85.14
Arredondo Automotive Group	Inv. 293037	07/23/2024	Inv. 293037 Unit 52 - Reinstall...	01-150-56600-0000-1	342.86
Arredondo Automotive Group	Inv. 293158	07/23/2024	Inv. 293158 Unit 55 - Windshie..	01-150-56600-0000-1	678.87
Arredondo Automotive Group	Inv. 293448	07/23/2024	Inv. 293448 Unit 28 - Shifter C...	01-150-56600-0000-1	690.00
Arredondo Automotive Group	Inv. 293546	07/23/2024	Inv. 293546 Unit 48 - 2 Tires /...	01-150-56600-0000-1	718.76
Vendor Arredondo Automotive - Arredondo Automotive Group Total:					2,515.63
Vendor: At&t Mobility - At&t Mobility					
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	01-105-57800-0000-1	22.36
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	01-110-57800-0000-1	28.97
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	01-115-57800-0000-1	42.80
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	01-140-57800-0000-1	13.79
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	01-155-57800-0000-1	13.79
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	01-160-57800-0000-1	13.79
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	01-165-57800-0000-1	69.67
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	01-175-57800-0000-1	13.79
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	30-500-57800-0000-1	130.96
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	31-505-57800-0000-1	14.27
At&t Mobility	AT&T July 2024 Monthly 2872...	07/16/2024	AT&T July 2024 Monthly 2872...	32-510-57800-0000-1	130.96
At&t Mobility	AT&T July 2024 Monthly 2873...	07/16/2024	AT&T July 2024 Monthly 2873...	01-180-57800-0000-1	45.05
At&t Mobility	AT&T July 2024 Monthly 2873...	07/16/2024	AT&T July 2024 Monthly 2873...	20-200-57800-0000-1	9.01

Expense Approval Report

Payment Dates: 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
At&t Mobility	AT&T July 2024 Monthly 2873...	07/16/2024	AT&T July 2024 Monthly 2873...	30-500-57800-0000-1	193.64
At&t Mobility	AT&T July 2024 Monthly 2873...	07/16/2024	AT&T July 2024 Monthly 2873...	32-510-57800-0000-1	188.60
At&t Mobility	AT&T July 2024 Monthly 2873...	07/16/2024	AT&T July 2024 Monthly 2873...	34-520-57800-0000-1	45.05
Vendor At&t Mobility - At&t Mobility Total:					976.50
Vendor: Auto Zone - Auto Zone					
Auto Zone	INV 6270914682	07/23/2024	INV 6270914682 Streets- Vehi...	01-180-56600-0000-1	40.03
Auto Zone	Inv. 6270906334	07/23/2024	Inv. 6270906334 Vehicle Main...	01-150-56600-0000-1	31.37
Vendor Auto Zone - Auto Zone Total:					71.40
Vendor: Berchtold Equipment - Berchtold Equipment					
Berchtold Equipment	INV P25705	07/23/2024	INV P25705 Mower Blade	01-180-57400-0000-1	167.64
Vendor Berchtold Equipment - Berchtold Equipment Total:					167.64
Vendor: the round up - Bramaloma Inc					
Bramaloma Inc	Inv. 0082675	07/23/2024	Inv. 0082675 - K9 Police Progr...	01-150-56000-0000-1	80.09
Vendor the round up - Bramaloma Inc Total:					80.09
Vendor: Brenntag - Brenntag Pacific Inc.					
Brenntag Pacific Inc.	IN BPI434858	07/23/2024	IN BPI434858 Garzoli Well Sul...	32-510-57400-0000-1	1,631.95
Brenntag Pacific Inc.	INV BPI440833	07/23/2024	INV BPI440833 Well #6 L A Ch...	32-510-57400-0000-1	1,688.59
Brenntag Pacific Inc.	INV BPI441224	07/23/2024	INV BPI441224 Garzoili Well L...	32-510-57400-0000-1	3,067.88
Brenntag Pacific Inc.	INV BPI444305	07/23/2024	INV BPI444305 Browning Well...	32-510-58200-0000-1	777.39
Vendor Brenntag - Brenntag Pacific Inc. Total:					7,165.81
Vendor: Brink's, Inc. - Brink's, Inc.					
Brink's, Inc.	INV 6705272	07/15/2024	INV 6705272 Billing Period 06...	01-130-51200-0000-1	133.80
Brink's, Inc.	INV 6705272	07/15/2024	INV 6705272 Billing Period 06...	30-500-51200-0000-1	133.80
Brink's, Inc.	INV 6705272	07/15/2024	INV 6705272 Billing Period 06...	31-505-51200-0000-1	133.80
Brink's, Inc.	INV 6705272	07/15/2024	INV 6705272 Billing Period 06...	32-510-51200-0000-1	133.80
Vendor Brink's, Inc. - Brink's, Inc. Total:					535.20
Vendor: BSK ASSOCIATES - BSK ASSOCIATES					
BSK ASSOCIATES	INV AH16567	07/23/2024	INV AH16567 Quanti-Tray 51 ...	32-510-58200-0000-1	160.00
BSK ASSOCIATES	INV AH16568	07/23/2024	INV AH16568 Quanti-Tray 51 ...	32-510-58200-0000-1	130.00
BSK ASSOCIATES	INV AH16674	07/23/2024	INV AH16674 Quanti-Tray 51 ...	32-510-58200-0000-1	130.00
BSK ASSOCIATES	INV AH17015	07/23/2024	INV AH17015 Garzoli Well Ars...	32-510-58200-0000-1	100.00
BSK ASSOCIATES	INV AH17053	07/23/2024	INV AH17053 Arsemic CA DW ...	32-510-58200-0000-1	190.00
BSK ASSOCIATES	INV AH17063	07/23/2024	INV AH17063 BOD Chloride T...	32-510-58200-0000-1	280.00
BSK ASSOCIATES	INV AH17081	07/23/2024	INV AH17081 Quanti-Tray 51 ...	32-510-58200-0000-1	688.00
BSK ASSOCIATES	INV AH17452	07/23/2024	INV AH17452 Nitrate TCP	32-510-58200-0000-1	285.00
Vendor BSK ASSOCIATES - BSK ASSOCIATES Total:					1,963.00
Vendor: CALCLEAN - Cal Clean LLC					
Cal Clean LLC	INV 0000290	07/23/2024	INV 0000290 Cal Clean City Co...	01-190-52200-0000-1	280.00
Cal Clean LLC	INV 0000291	07/23/2024	INV 0000291 Cal Clean Service...	01-190-52200-0000-1	920.00
Vendor CALCLEAN - Cal Clean LLC Total:					1,200.00
Vendor: California Police - California Police					
California Police	Inv. 6601	07/23/2024	Inv. 6601 2024-2025 CPCA Du...	01-150-53200-0000-1	365.00
Vendor California Police - California Police Total:					365.00
Vendor: Vulcan Materials Co - CalMat Co.					
CalMat Co.	INV 478616 Finance Charge	07/15/2024	INV 478616 Finance Charge	32-510-56410-0000-1	35.25
CalMat Co.	INV 74061705	07/23/2024	INV 74061705 San Emidio San...	01-180-57400-0000-1	969.99
Vendor Vulcan Materials Co - CalMat Co. Total:					1,005.24
Vendor: Cannon - Cannon Corporation					
Cannon Corporation	INV 88803	07/23/2024	Invoice #88029 Engineer servi...	30-500-56000-7820-1	18,549.83
Vendor Cannon - Cannon Corporation Total:					18,549.83
Vendor: Cheri Diebel - Cheri Diebel					
Cheri Diebel	INV0027604	07/23/2024	Veteran Hall Deposit Refund -...	01-24000-0000-1	350.00
Vendor Cheri Diebel - Cheri Diebel Total:					350.00
Vendor: Cintas - Cintas Corporation No.3					
Cintas Corporation No.3	Inv. 5220604008	07/23/2024	Inv. 5220604008 - AED PD	01-150-56000-0000-1	70.33
Vendor Cintas - Cintas Corporation No.3 Total:					70.33

Expense Approval Report

Payment Dates: 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
Vendor: CivicPlus - CivicPlus LLC					
CivicPlus LLC	Inv. 306385	07/15/2024	Inv. 306385 City Website Fees	01-130-56000-0000-1	497.08
Vendor CivicPlus - CivicPlus LLC Total:					497.08
Vendor: Clearsource Financia - Clearsource Financial Consulting					
Clearsource Financial Consulti...	INV UFS0624-448	07/15/2024	INV UFS0624-448 Progress Bill...	01-140-56000-0000-1	3,700.00
Vendor Clearsource Financia - Clearsource Financial Consulting Total:					3,700.00
Vendor: Consolidated Electri - Consolidated Electrical Distributors, Inc					
Consolidated Electrical Distrib...	INV 0332-1103048	07/23/2024	INV 0332-1103048 A/C Repair	30-500-56400-0000-1	2,983.06
Vendor Consolidated Electri - Consolidated Electrical Distributors, Inc Total:					2,983.06
Vendor: Core & Main LP - Core & Main LP					
Core & Main LP	INV 0008573	07/23/2024	INV 0008573 pH Buffer Soluti...	32-510-57400-0000-1	509.15
Core & Main LP	INV U995784	07/23/2024	INV U995784 Water Dept. Su...	32-510-57400-0000-1	187.27
Vendor Core & Main LP - Core & Main LP Total:					696.42
Vendor: De Lage Landen - De Lage Landen Financial Services Inc					
De Lage Landen Financial Serv...	INV 587943134	07/16/2024	INV 587943134 08/01/2024 5...	01-130-52200-0000-1	117.99
De Lage Landen Financial Serv...	INV 587959913	07/23/2024	INV 587959913 07/07/2024 5...	01-150-52200-0000-1	113.66
Vendor De Lage Landen - De Lage Landen Financial Services Inc Total:					231.65
Vendor: Dee Jaspar - Dee Jaspar & Associates, Inc					
Dee Jaspar & Associates, Inc	INV 24-00628	07/23/2024	INV 24-00628 Storage Tank Fill..	32-510-56000-0000-1	528.50
Dee Jaspar & Associates, Inc	INV 24-00629	07/23/2024	INV 24-00629 Browning Well T...	32-510-56000-0000-1	20,207.25
Vendor Dee Jaspar - Dee Jaspar & Associates, Inc Total:					20,735.75
Vendor: DSI - DocuSign, INC.					
DocuSign, INC.	INV 111100357816	07/23/2024	DocuSign INV 111100357816 ...	01-130-56000-0000-1	2,990.00
Vendor DSI - DocuSign, INC. Total:					2,990.00
Vendor: DOM Solar - DOM Solar Lessor LTD.					
DOM Solar Lessor LTD.	INV 33635628	07/15/2024	INV 33635628 June 24 Monthl...	32-510-58000-0000-1	7,322.89
Vendor DOM Solar - DOM Solar Lessor LTD. Total:					7,322.89
Vendor: EDD - EDD					
EDD	INV0027609	07/25/2024	SDI - State Disability Insurance	30-22200-0000-1	3.27
EDD	INV0027613	07/25/2024	State Income Tax Withholding	01-22200-0000-1	70.95
EDD	INV0027614	07/25/2024	SDI - State Disability Insurance	01-22200-0000-1	26.42
EDD	INV0027637	07/25/2024	State Income Tax Withholding	01-22200-0000-1	2,663.09
EDD	INV0027637	07/25/2024	State Income Tax Withholding	30-22200-0000-1	6.20
EDD	INV0027637	07/25/2024	State Income Tax Withholding	32-22200-0000-1	6.22
EDD	INV0027638	07/25/2024	SDI - State Disability Insurance	01-22200-0000-1	802.73
EDD	INV0027638	07/25/2024	SDI - State Disability Insurance	30-22200-0000-1	1.81
EDD	INV0027638	07/25/2024	SDI - State Disability Insurance	32-22200-0000-1	1.80
EDD	INV0027665	07/25/2024	State Income Tax Withholding	01-22200-0000-1	904.57
EDD	INV0027665	07/25/2024	State Income Tax Withholding	20-22200-0000-1	34.92
EDD	INV0027665	07/25/2024	State Income Tax Withholding	30-22200-0000-1	569.14
EDD	INV0027665	07/25/2024	State Income Tax Withholding	31-22200-0000-1	242.05
EDD	INV0027665	07/25/2024	State Income Tax Withholding	32-22200-0000-1	384.62
EDD	INV0027665	07/25/2024	State Income Tax Withholding	34-22200-0000-1	26.58
EDD	INV0027666	07/25/2024	SDI - State Disability Insurance	01-22200-0000-1	355.07
EDD	INV0027666	07/25/2024	SDI - State Disability Insurance	20-22200-0000-1	35.50
EDD	INV0027666	07/25/2024	SDI - State Disability Insurance	30-22200-0000-1	224.10
EDD	INV0027666	07/25/2024	SDI - State Disability Insurance	31-22200-0000-1	83.77
EDD	INV0027666	07/25/2024	SDI - State Disability Insurance	32-22200-0000-1	228.85
EDD	INV0027666	07/25/2024	SDI - State Disability Insurance	34-22200-0000-1	20.32
EDD	INV0027667	07/25/2024	State Unemployment Insuran...	01-22250-0000-1	118.19
EDD	INV0027667	07/25/2024	State Unemployment Insuran...	30-22250-0000-1	6.01
EDD	INV0027667	07/25/2024	State Unemployment Insuran...	31-22250-0000-1	6.01
EDD	INV0027667	07/25/2024	State Unemployment Insuran...	32-22250-0000-1	6.03
EDD	INV0027668	07/25/2024	Employment Training Tax	01-22275-0000-1	2.52
EDD	INV0027668	07/25/2024	Employment Training Tax	30-22275-0000-1	0.13
EDD	INV0027668	07/25/2024	Employment Training Tax	31-22275-0000-1	0.13

Expense Approval Report

Payment Dates: 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
EDD	INV0027668	07/25/2024	Employment Training Tax	32-22275-0000-1	0.12
Vendor EDD - EDD Total:					6,831.12

Vendor: EFTPS - Electronic Federal Tax Payment System

Electronic Federal Tax Paymen...	INV0027608	07/25/2024	Social Security	30-22100-0000-1	36.88
Electronic Federal Tax Paymen...	INV0027610	07/25/2024	Medicare	30-22150-0000-1	8.62
Electronic Federal Tax Paymen...	INV0027611	07/25/2024	Federal Income Tax Withholdi...	01-22050-0000-1	180.83
Electronic Federal Tax Paymen...	INV0027612	07/25/2024	Social Security	01-22100-0000-1	297.88
Electronic Federal Tax Paymen...	INV0027615	07/25/2024	Medicare	01-22150-0000-1	69.66
Electronic Federal Tax Paymen...	INV0027635	07/25/2024	Federal Income Tax Withholdi...	01-22050-0000-1	6,098.00
Electronic Federal Tax Paymen...	INV0027635	07/25/2024	Federal Income Tax Withholdi...	30-22050-0000-1	14.97
Electronic Federal Tax Paymen...	INV0027635	07/25/2024	Federal Income Tax Withholdi...	32-22050-0000-1	14.94
Electronic Federal Tax Paymen...	INV0027636	07/25/2024	Social Security	01-22100-0000-1	9,048.68
Electronic Federal Tax Paymen...	INV0027636	07/25/2024	Social Security	30-22100-0000-1	20.36
Electronic Federal Tax Paymen...	INV0027636	07/25/2024	Social Security	32-22100-0000-1	20.36
Electronic Federal Tax Paymen...	INV0027639	07/25/2024	Medicare	01-22150-0000-1	2,116.22
Electronic Federal Tax Paymen...	INV0027639	07/25/2024	Medicare	30-22150-0000-1	4.76
Electronic Federal Tax Paymen...	INV0027639	07/25/2024	Medicare	32-22150-0000-1	4.74
Electronic Federal Tax Paymen...	INV0027663	07/25/2024	Federal Income Tax Withholdi...	01-22050-0000-1	2,042.15
Electronic Federal Tax Paymen...	INV0027663	07/25/2024	Federal Income Tax Withholdi...	20-22050-0000-1	113.86
Electronic Federal Tax Paymen...	INV0027663	07/25/2024	Federal Income Tax Withholdi...	30-22050-0000-1	901.28
Electronic Federal Tax Paymen...	INV0027663	07/25/2024	Federal Income Tax Withholdi...	31-22050-0000-1	354.51
Electronic Federal Tax Paymen...	INV0027663	07/25/2024	Federal Income Tax Withholdi...	32-22050-0000-1	646.20
Electronic Federal Tax Paymen...	INV0027663	07/25/2024	Federal Income Tax Withholdi...	34-22050-0000-1	121.63
Electronic Federal Tax Paymen...	INV0027664	07/25/2024	Social Security	01-22100-0000-1	4,002.66
Electronic Federal Tax Paymen...	INV0027664	07/25/2024	Social Security	20-22100-0000-1	400.12
Electronic Federal Tax Paymen...	INV0027664	07/25/2024	Social Security	30-22100-0000-1	2,526.26
Electronic Federal Tax Paymen...	INV0027664	07/25/2024	Social Security	31-22100-0000-1	944.32
Electronic Federal Tax Paymen...	INV0027664	07/25/2024	Social Security	32-22100-0000-1	2,579.76
Electronic Federal Tax Paymen...	INV0027664	07/25/2024	Social Security	34-22100-0000-1	229.02
Electronic Federal Tax Paymen...	INV0027669	07/25/2024	Medicare	01-22150-0000-1	936.18
Electronic Federal Tax Paymen...	INV0027669	07/25/2024	Medicare	20-22150-0000-1	93.58
Electronic Federal Tax Paymen...	INV0027669	07/25/2024	Medicare	30-22150-0000-1	590.84
Electronic Federal Tax Paymen...	INV0027669	07/25/2024	Medicare	31-22150-0000-1	220.84
Electronic Federal Tax Paymen...	INV0027669	07/25/2024	Medicare	32-22150-0000-1	603.30
Electronic Federal Tax Paymen...	INV0027669	07/25/2024	Medicare	34-22150-0000-1	53.56
Vendor EFTPS - Electronic Federal Tax Payment System Total:					35,296.97

Vendor: Fastenal Company - Fastenal Company

Fastenal Company	INV CADEL 113701	07/15/2024	INV CADEL 113701 Building R...	01-185-56400-0000-1	42.83
Fastenal Company	INV CADEL 113746	07/15/2024	INV CADEL 113746 QwikStik	01-185-56400-0000-1	97.43
Vendor Fastenal Company - Fastenal Company Total:					140.26

Vendor: Frontier - Frontier California Inc.

Frontier California Inc.	Frontier July 2024 661792016...	07/16/2024	Frontier July 2024 661792016...	01-150-57800-0000-1	253.88
Frontier California Inc.	Frontier July 24 66179233910...	07/16/2024	Frontier July 24 66179233910...	30-500-57800-0000-1	225.31
Vendor Frontier - Frontier California Inc. Total:					479.19

Vendor: gotocom - GoTo Communications Inc

GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-105-57800-0000-1	8.61
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-110-57800-0000-1	26.91
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-115-57800-0000-1	30.14
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-140-57800-0000-1	30.14
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-150-57800-0000-1	258.35
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-155-57800-0000-1	8.61
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-160-57800-0000-1	8.61
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-165-57800-0000-1	24.33
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-175-57800-0000-1	30.14
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	01-180-57800-0000-1	35.95
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	20-200-57800-0000-1	0.65
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	30-500-57800-0000-1	153.50
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	31-505-57800-0000-1	63.51

Expense Approval Report

Payment Dates: 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
GoTo Communications Inc	INV7103059127	07/23/2024	INV7103059127 GoTo Monthl...	32-510-57800-0000-1	138.66
Vendor gotocom - GoTo Communications Inc Total:					818.11
Vendor: Grainger - Grainger					
Grainger	INV 9185516920	07/23/2024	INV 9185516920 WWTP Oper...	30-500-57400-0000-1	172.32
Vendor Grainger - Grainger Total:					172.32
Vendor: Granite Auto Parts I - Granite Auto Parts Inc					
Granite Auto Parts Inc	INV 845625 Sip Pump	07/16/2024	INV 845625 Sip Pump	32-510-56600-0000-1	5.94
Granite Auto Parts Inc	INV 845646	07/16/2024	INV 845646 Streets Vehicle M...	01-180-56600-0000-1	30.84
Granite Auto Parts Inc	INV 845122	07/23/2024	INV 845122	32-510-56410-0000-1	51.87
Granite Auto Parts Inc	INV 846026	07/23/2024	INV 846026 Water Swivel for ...	32-510-57400-0000-1	35.71
Granite Auto Parts Inc	INV 846044	07/23/2024	INV 846044 Streets Vehicle M...	01-180-56600-0000-1	24.89
Granite Auto Parts Inc	INV 846076	07/23/2024	INV 846076 WWTP Vehicle Ma...	30-500-56600-0000-1	649.49
Granite Auto Parts Inc	INV 846101	07/23/2024	INV 846101 Streets Dept. Vehi...	01-180-56600-0000-1	874.60
Granite Auto Parts Inc	INV 846232	07/23/2024	INV 846232 WWTP Vehicle Sq...	30-500-56600-0000-1	11.90
Vendor Granite Auto Parts I - Granite Auto Parts Inc Total:					1,685.24
Vendor: HDL and Associates - Hinderliter, de Llamas & Associates					
Hinderliter, de Llamas & Assoc...	HDL INV SIN040092	07/23/2024	HDL INV SIN040092 Q4/2023 ...	01-130-56000-0000-1	600.00
Hinderliter, de Llamas & Assoc...	INV SIN039763	07/23/2024	HDL INV SIN039763 Q4/2023 ...	01-130-56000-0000-1	1,399.74
Vendor HDL and Associates - Hinderliter, de Llamas & Associates Total:					1,999.74
Vendor: Hodges - Hodges Law Group					
Hodges Law Group	INV 00583	07/23/2024	INV 00583 Administration Leg...	01-130-56100-0000-1	1,165.50
Hodges Law Group	INV 00583	07/23/2024	INV 00583 Reimbursable Legal...	01-130-56100-0000-1	237.00
Hodges Law Group	INV 00583	07/23/2024	INV 00583 Public Works Legal ...	01-130-56100-0000-1	504.00
Hodges Law Group	INV 00583	07/23/2024	INV 00583 City Council Legal S...	01-130-56100-0000-1	1,110.00
Hodges Law Group	INV 00583	07/23/2024	INV 00583 Contractual Fee Le...	01-130-56100-0000-1	980.50
Hodges Law Group	INV 00583	07/23/2024	INV 00583 Human Resources ...	01-130-56100-0000-1	2,551.50
Hodges Law Group	INV 00583	07/23/2024	INV 00583 Community Dev. L...	01-130-56100-0000-1	2,821.00
Hodges Law Group	INV 00583	07/23/2024	INV 00583 Police Depart. Legal...	01-130-56100-0000-1	721.50
Vendor Hodges - Hodges Law Group Total:					10,091.00
Vendor: Home Depot - Home Depot					
Home Depot	CC #2532 06.28.24 Home Dep...	07/15/2024	CC #2532 06.28.24 Home Dep...	20-200-57400-0000-1	163.32
Home Depot	CC #2532 07.01.24 LLMD Supp...	07/16/2024	CC #2532 07.01.24 LLMD Supp...	20-200-57400-0000-1	161.34
Home Depot	CC #2532 07.03.24 Water Dep...	07/16/2024	CC #2532 07.03.24 Water Dep...	32-510-57400-0000-1	431.92
Home Depot	INV 3973626	07/16/2024	INV 3973626 WWTP Concrete...	30-500-56400-0000-1	55.00
Home Depot	INV 4534562	07/16/2024	INV 4534562 PVC & Anti-Siph...	20-200-57400-0000-1	198.32
Home Depot	INV 5973926	07/16/2024	INV 5973926 Builing Repair a...	30-500-56400-0000-1	304.64
Home Depot	INV 5973927	07/16/2024	INV 5973927 Water Dept.- Op...	32-510-57400-0000-1	75.74
Home Depot	INV 3083750	07/23/2024	INV 3083750 Streets Dept. Op...	01-180-57400-0000-1	328.21
Home Depot	INV 7543646	07/23/2024	INV 7543646 Facilities Building...	01-190-56400-0000-1	62.46
Vendor Home Depot - Home Depot Total:					1,780.95
Vendor: Interwest Consulting - Interwest Consulting Group, Inc					
Interwest Consulting Group, I...	INV 406185	07/15/2024	INV 406185 InterWest Hourly ...	01-160-51400-0000-1	4,010.63
Interwest Consulting Group, I...	INV 406580	07/15/2024	INV 406580 InterWest Hourly ...	01-160-51400-0000-1	190.00
Interwest Consulting Group, I...	INV 85739	07/15/2024	INV 85739 Interwest Plan Che...	01-160-51400-0000-1	60.00
Interwest Consulting Group, I...	INV 473523	07/16/2024	INV 473523 Building Inspector...	01-160-51400-0000-1	6,480.00
Interwest Consulting Group, I...	INV 89951	07/16/2024	INV 89951 InterWest Hourly P...	01-160-51400-0000-1	750.00
Vendor Interwest Consulting - Interwest Consulting Group, Inc Total:					11,490.63
Vendor: Irrigation Concepts - Irrigation Concepts					
Irrigation Concepts	INV 49042 Garzoli Well Pull P...	07/15/2024	INV 49042 Garzoli Well Pull P...	30-500-56400-0000-1	625.00
Vendor Irrigation Concepts - Irrigation Concepts Total:					625.00
Vendor: Jim Burke - Jim Burke					
Jim Burke	Inv.754028	07/15/2024	Inv.754028 Unit 51 Oil Change...	01-150-56600-0000-1	96.30
Vendor Jim Burke - Jim Burke Total:					96.30
Vendor: John Hancock - John Hancock					
John Hancock	INV0027606	07/25/2024	401K - Employer	30-20800-0000-1	28.68
John Hancock	INV0027607	07/25/2024	401K - Employee	30-20800-0000-1	2.97
John Hancock	INV0027616	07/25/2024	401K - Employer	01-20800-0000-1	4,178.20

Expense Approval Report

Payment Dates: 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
John Hancock	INV0027616	07/25/2024	401K - Employer	30-20800-0000-1	16.08
John Hancock	INV0027616	07/25/2024	401K - Employer	32-20800-0000-1	16.05
John Hancock	INV0027617	07/25/2024	401K - Employee	01-20800-0000-1	3,347.09
John Hancock	INV0027623	07/25/2024	401K Loan 1	01-20800-0000-1	89.29
John Hancock	INV0027624	07/25/2024	401K Loan 1	01-20800-0000-1	109.43
John Hancock	INV0027625	07/25/2024	401K Loan 1	01-20800-0000-1	512.62
John Hancock	INV0027626	07/25/2024	401K Loan 2	01-20800-0000-1	117.75
John Hancock	INV0027627	07/25/2024	401k Contribution	01-20800-0000-1	312.78
John Hancock	INV0027628	07/25/2024	401k Contribution	01-20800-0000-1	354.71
John Hancock	INV0027629	07/25/2024	401k Contribution	01-20800-0000-1	304.71
John Hancock	INV0027630	07/25/2024	401k Contribution	01-20800-0000-1	265.74
John Hancock	INV0027631	07/25/2024	401k Contribution	01-20800-0000-1	653.84
John Hancock	INV0027632	07/25/2024	401k Contribution	01-20800-0000-1	290.20
John Hancock	INV0027633	07/25/2024	401k Contribution	01-20800-0000-1	286.06
John Hancock	INV0027640	07/25/2024	401K - Employer	01-20800-0000-1	1,866.13
John Hancock	INV0027640	07/25/2024	401K - Employer	30-20800-0000-1	1,778.17
John Hancock	INV0027640	07/25/2024	401K - Employer	31-20800-0000-1	690.26
John Hancock	INV0027640	07/25/2024	401K - Employer	32-20800-0000-1	1,632.69
John Hancock	INV0027641	07/25/2024	401K - Employee	01-20800-0000-1	532.11
John Hancock	INV0027641	07/25/2024	401K - Employee	20-20800-0000-1	98.85
John Hancock	INV0027641	07/25/2024	401K - Employee	30-20800-0000-1	426.67
John Hancock	INV0027641	07/25/2024	401K - Employee	31-20800-0000-1	268.72
John Hancock	INV0027641	07/25/2024	401K - Employee	32-20800-0000-1	680.98
John Hancock	INV0027642	07/25/2024	401K - Employer	20-20800-0000-1	313.36
John Hancock	INV0027649	07/25/2024	401K Loan 2	01-20800-0000-1	2.98
John Hancock	INV0027649	07/25/2024	401K Loan 2	30-20800-0000-1	4.47
John Hancock	INV0027649	07/25/2024	401K Loan 2	32-20800-0000-1	4.46
John Hancock	INV0027650	07/25/2024	401K Loan 2	01-20800-0000-1	99.46
John Hancock	INV0027650	07/25/2024	401K Loan 2	30-20800-0000-1	99.46
John Hancock	INV0027650	07/25/2024	401K Loan 2	31-20800-0000-1	99.46
John Hancock	INV0027650	07/25/2024	401K Loan 2	32-20800-0000-1	99.46
John Hancock	INV0027651	07/25/2024	401K Loan 4	34-20800-0000-1	75.00
John Hancock	INV0027652	07/25/2024	401K Loan 5	34-20800-0000-1	69.21
John Hancock	INV0027653	07/25/2024	401K Loan 4	01-20800-0000-1	145.50
John Hancock	INV0027653	07/25/2024	401K Loan 4	20-20800-0000-1	4.50
John Hancock	INV0027654	07/25/2024	401K Loan 4	01-20800-0000-1	51.07
John Hancock	INV0027654	07/25/2024	401K Loan 4	20-20800-0000-1	1.58
John Hancock	INV0027655	07/25/2024	401k Contribution	01-20800-0000-1	256.48
John Hancock	INV0027656	07/25/2024	401k Contribution	01-20800-0000-1	494.89
John Hancock	INV0027657	07/25/2024	401k Contribution	01-20800-0000-1	236.78
John Hancock	INV0027657	07/25/2024	401k Contribution	20-20800-0000-1	7.33
John Hancock	INV0027658	07/25/2024	401k Contribution	34-20800-0000-1	177.12
John Hancock	INV0027659	07/25/2024	401k Contribution	01-20800-0000-1	232.39
Vendor John Hancock - John Hancock Total:					21,335.74

Vendor: Jorge's Smog & Repai - Jorge's Smog & Repai

Jorge's Smog & Repai	INV 020059	07/16/2024	INV 020059 Water Vehicle Re...	32-510-56600-0000-1	1,000.78
Jorge's Smog & Repai	INV 020079	07/16/2024	INV 020079 A/C Service	01-180-56600-0000-1	205.82
Vendor Jorge's Smog & Repai - Jorge's Smog & Repai Total:					1,206.60

Vendor: Kern County Chief - Kern County Chief

Kern County Chief	Inv. 24-123	07/23/2024	Inv. 24-123 Membership Dues...	01-150-53200-0000-1	100.00
Vendor Kern County Chief - Kern County Chief Total:					100.00

Vendor: Kern County Fire - Kern County Fire

Kern County Fire	INV25-000009	07/23/2024	INV25-000009 1st Quarter (FY...	01-130-58900-0000-1	239,129.25
Vendor Kern County Fire - Kern County Fire Total:					239,129.25

Vendor: Kern Machinery - Kern Machinery

Kern Machinery	INV 102-1159940	07/15/2024	INV 102-1159940 Emergency ...	01-180-56430-0000-1	4,870.22
Vendor Kern Machinery - Kern Machinery Total:					4,870.22

Vendor: KRC SAFETY CO INC - KRC SAFETY CO INC

KRC SAFETY CO INC	INV 63847	07/15/2024	INV 63847 Street Closure Barri...	01-180-56500-0000-1	3,094.96
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Expense Approval Report

Payment Dates: 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
KRC SAFETY CO INC	INV 63848	07/23/2024	INV 63848 Streets Directional ...	01-180-57400-0000-1	4,888.47
KRC SAFETY CO INC	INV 64448	07/23/2024	INV 64448 Streets Directional ...	01-180-57400-0000-1	2,819.73
Vendor KRC SAFETY CO INC - KRC SAFETY CO INC Total:					10,803.16
Vendor: Leaf - LEAF Capital Funding LLC					
LEAF Capital Funding LLC	INV 16769575	07/16/2024	INV 16769575 Xerox C8155 M...	01-130-52200-0000-1	400.53
Vendor Leaf - LEAF Capital Funding LLC Total:					400.53
Vendor: Mariana Sanchez - Mariana Sanchez					
Mariana Sanchez	INV0027428	07/16/2024	Council MeetingTranslation & ...	01-105-52200-0000-1	200.00
Vendor Mariana Sanchez - Mariana Sanchez Total:					200.00
Vendor: martin paris and mul - Martin Paris and Mullins Investigations LLC					
Martin Paris and Mullins Inves...	Inv. 2024-029 IA 24-002	07/16/2024	Inv. 2024-029 IA 24-002	01-150-56000-0000-1	1,600.00
Vendor martin paris and mul - Martin Paris and Mullins Investigations LLC Total:					1,600.00
Vendor: MAURO CERVANTES - MAURO CERVANTES					
MAURO CERVANTES	INV0027507	07/18/2024	BL#20719 Business License Ap...	01-100-41100-0000-1	215.00
Vendor MAURO CERVANTES - MAURO CERVANTES Total:					215.00
Vendor: McFarland Tire - McFarland Tire					
McFarland Tire	INV 34799	07/16/2024	INV 34799 Fix Flat	30-500-56600-0000-1	20.00
McFarland Tire	INV34255	07/23/2024	INV34255 Water Dept. Vehicle...	32-510-56600-0000-1	20.00
Vendor McFarland Tire - McFarland Tire Total:					40.00
Vendor: MIGUEL ORTEGA - MIGUEL ORTEGA					
MIGUEL ORTEGA	INV0027605	07/23/2024	GEO SCHOLARSHIP DE	01-105-57100-0000-1	500.00
Vendor MIGUEL ORTEGA - MIGUEL ORTEGA Total:					500.00
Vendor: MP Environmental Ser - MP Environmental Services, Inc					
MP Environmental Services, Inc	INV 2447615	07/15/2024	INV 2447615 Streets Elmo Su...	01-180-56000-0000-1	3,907.03
MP Environmental Services, Inc	INV 24523017	07/23/2024	INV 24523017 Office Trailer	30-500-56400-0000-1	935.00
Vendor MP Environmental Ser - MP Environmental Services, Inc Total:					4,842.03
Vendor: Munguia - Munguia Heating & Air Conditioning					
Munguia Heating & Air Condit...	INV I-7111-1	07/23/2024	INV I-7111-1 Garzoli Well Repa...	32-510-56410-0000-1	695.00
Munguia Heating & Air Condit...	Inv. I-6716-1	07/23/2024	Inv. I-6716-1 Service Call - PD ...	01-150-56400-0000-1	335.00
Munguia Heating & Air Condit...	Inv. I-7316-1	07/23/2024	Inv. I-7316-1 Service Call - PD ...	01-150-56400-0000-1	150.00
Vendor Munguia - Munguia Heating & Air Conditioning Total:					1,180.00
Vendor: Nutrien Ag Solutions - Nutrien Ag Solutions, Inc.					
Nutrien Ag Solutions, Inc.	INV 54931982	07/15/2024	INV 54931982 Gopher Bait	01-180-57400-0000-1	541.25
Vendor Nutrien Ag Solutions - Nutrien Ag Solutions, Inc. Total:					541.25
Vendor: Office Depot - Office Depot					
Office Depot	INV 371412116001	07/23/2024	INV 371412116001 Streets an...	01-180-57200-0000-1	207.99
Office Depot	Order 37412116	07/23/2024	Office Depot Supplies Order 3...	01-180-57200-0000-1	230.61
Office Depot	Order 37412116	07/23/2024	Office Depot Supplies Order 3...	32-510-57200-0000-1	230.61
Vendor Office Depot - Office Depot Total:					669.21
Vendor: P & J Electric - P & J Electric					
P & J Electric	INV 8946	07/16/2024	INV 8946 Well 6 Electrical Rep...	32-510-56000-0000-1	2,132.46
Vendor P & J Electric - P & J Electric Total:					2,132.46
Vendor: SALD100 - PAUL SALDANA					
PAUL SALDANA	INV0027598	07/23/2024	Reimbursement for City Clerk...	01-111-53200-0000-1	125.00
Vendor SALD100 - PAUL SALDANA Total:					125.00
Vendor: PG&E COMPANY - PG&E COMPANY					
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	2514556883-5	01-180-58000-0000-1	153.35
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	4022268837-2	01-180-58000-0000-1	146.98
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	9777659623-7	01-180-58000-0000-1	9.89
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	0891499733-6	01-180-58000-0000-1	86.10
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	4453174177-3	01-180-58000-0000-1	948.94
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	0664171738-1	01-180-58000-0000-1	61.91
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	7576987527-1	01-180-58000-0000-1	368.92
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	5629608181-5	01-180-58100-0000-1	30.17
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	356448726-8	01-180-58100-0000-1	61.51
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	6094933730-1	01-180-58100-0000-1	233.88

Expense Approval Report

Payment Dates: 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	5568620890-5	01-180-58100-0000-1	10.56
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	3877090180-9	01-180-58100-0000-1	470.07
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	5490736244-3	01-180-58100-0000-1	12.32
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	2012021553-6	01-180-58100-0000-1	1,119.36
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	1601672325-2	01-180-58100-0000-1	306.48
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	0741726506-8	01-180-58100-0000-1	556.44
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	4483764300-4	01-180-58100-0000-1	55.00
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	7663752590-8	01-180-58100-0000-1	26.88
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	4191871709-5	01-185-58000-0000-1	1,506.96
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	7668473786-9	01-190-58000-0000-1	3,403.54
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	3047362805-2	20-200-58100-0000-1	163.81
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	7336692458-4	20-200-58100-0000-1	1,636.47
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	6372122228-7	20-200-58100-0000-1	818.79
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	5794429226-7	20-200-58100-0000-1	253.09
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	0309941756-4	20-200-58100-0000-1	244.55
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	0979037755-1	20-200-58100-0000-1	9.85
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	5490736244-3	30-500-58000-0000-1	12.33
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	9048125100-8	30-500-58000-0000-1	253.08
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	5842445837-8	30-500-58000-0000-1	248.99
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	0425382282-1	32-510-58000-0000-1	152.65
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	0843084856-7	32-510-58000-0000-1	355.47
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	2687153110-4	32-510-58000-0000-1	25,753.54
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	7699604118-2	32-510-58000-0000-1	2,535.06
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	6395880662-0	32-510-58000-0000-1	24.65
PG&E COMPANY	PG&E June 2024 Monthly Billi...	07/16/2024	0382494192-0	32-510-58000-0000-1	9.85
PG&E COMPANY	INV0027601	07/23/2024	9777659623-7	01-180-58000-0000-1	10.56
PG&E COMPANY	INV0027601	07/23/2024	7576987527-1	01-180-58000-0000-1	461.18
PG&E COMPANY	INV0027601	07/23/2024	4453174177-3	01-180-58000-0000-1	1,568.66
PG&E COMPANY	INV0027601	07/23/2024	4022268837-2	01-180-58000-0000-1	148.30
PG&E COMPANY	INV0027601	07/23/2024	0891499733-6	01-180-58000-0000-1	85.55
PG&E COMPANY	INV0027601	07/23/2024	2514556883-5	01-180-58000-0000-1	143.06
PG&E COMPANY	INV0027601	07/23/2024	0664171738-1	01-180-58000-0000-1	62.41
PG&E COMPANY	INV0027601	07/23/2024	6094933730-1	01-180-58100-0000-1	223.91
PG&E COMPANY	INV0027601	07/23/2024	2012021553-6	01-180-58100-0000-1	1,119.36
PG&E COMPANY	INV0027601	07/23/2024	3877090180-9	01-180-58100-0000-1	470.09
PG&E COMPANY	INV0027601	07/23/2024	0741726506-8	01-180-58100-0000-1	556.45
PG&E COMPANY	INV0027601	07/23/2024	5568620890-5	01-180-58100-0000-1	10.57
PG&E COMPANY	INV0027601	07/23/2024	5490736244-3	01-180-58100-0000-1	12.32
PG&E COMPANY	INV0027601	07/23/2024	5629608181-5	01-180-58100-0000-1	30.16
PG&E COMPANY	INV0027601	07/23/2024	7663752590-8	01-180-58100-0000-1	26.89
PG&E COMPANY	INV0027601	07/23/2024	4483764300-4	01-180-58100-0000-1	55.00
PG&E COMPANY	INV0027601	07/23/2024	356448726-8	01-180-58100-0000-1	62.03
PG&E COMPANY	INV0027601	07/23/2024	1601672325-2	01-180-58100-0000-1	306.49
PG&E COMPANY	INV0027601	07/23/2024	4191871709-5	01-185-58000-0000-1	1,958.69
PG&E COMPANY	INV0027601	07/23/2024	7668473786-9	01-190-58000-0000-1	4,603.85
PG&E COMPANY	INV0027601	07/23/2024	7336692458-4	20-200-58100-0000-1	1,636.52
PG&E COMPANY	INV0027601	07/23/2024	0309941756-4	20-200-58100-0000-1	241.19
PG&E COMPANY	INV0027601	07/23/2024	5794429226-7	20-200-58100-0000-1	247.52
PG&E COMPANY	INV0027601	07/23/2024	6372122228-7	20-200-58100-0000-1	818.78
PG&E COMPANY	INV0027601	07/23/2024	0979037755-1	20-200-58100-0000-1	9.85
PG&E COMPANY	INV0027601	07/23/2024	3047362805-2	20-200-58100-0000-1	162.56
PG&E COMPANY	INV0027601	07/23/2024	5490736244-3	30-500-58000-0000-1	12.33
PG&E COMPANY	INV0027601	07/23/2024	9048125100-8	30-500-58000-0000-1	274.51
PG&E COMPANY	INV0027601	07/23/2024	5842445837-8	30-500-58000-0000-1	269.36
PG&E COMPANY	INV0027601	07/23/2024	7699604118-2	32-510-58000-0000-1	5,110.09
PG&E COMPANY	INV0027601	07/23/2024	2687153110-4	32-510-58000-0000-1	34,864.82
PG&E COMPANY	INV0027601	07/23/2024	0382494192-0	32-510-58000-0000-1	10.51
PG&E COMPANY	INV0027601	07/23/2024	0425382282-1	32-510-58000-0000-1	152.65
PG&E COMPANY	INV0027601	07/23/2024	6395880662-0	32-510-58000-0000-1	24.65

Expense Approval Report

Payment Dates: 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
PG&E COMPANY	INV0027601	07/23/2024	0843084856-7	32-510-58000-0000-1	370.27
Vendor PG&E COMPANY - PG&E COMPANY Total:					98,162.58
Vendor: Phoenix Group - Phoenix Group					
Phoenix Group	Citation Processing Services - #..07/15/2024		Citation Processing Services - #..01-165-56000-0000-1		62.62
Vendor Phoenix Group - Phoenix Group Total:					62.62
Vendor: Pitney Bowes - Pitney Bowes					
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-105-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-110-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-115-55600-0000-1	26.70
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-130-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-140-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-150-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-155-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-160-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-165-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	01-175-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	30-500-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	31-505-55600-0000-1	26.57
Pitney Bowes	INV0027603	07/23/2024	Postage Credit Line	32-510-55600-0000-1	26.57
Vendor Pitney Bowes - Pitney Bowes Total:					345.54
Vendor: PLATT - Rexel USA Supply					
Rexel USA Supply	INV 5I79181	07/23/2024	INV 5I79181 Facility Building ...	01-190-56400-0000-1	271.25
Rexel USA Supply	INV 5J23277	07/23/2024	INV 5J23277 WWTP Operating...	30-500-57400-0000-1	22.49
Rexel USA Supply	INV 5J31969	07/23/2024	INV 5J31969 Conduit 1/2 IN E...	30-500-57400-0000-1	12.25
Vendor PLATT - Rexel USA Supply Total:					305.99
Vendor: San Joaquin Paint - San Joaquin Paint					
San Joaquin Paint	INV 132210 CA State Paint Re...	07/15/2024	INV 132210 CA State Paint Re...	01-180-57400-0000-1	173.86
San Joaquin Paint	INV 132210 CA State Paint Re...	07/15/2024	INV 132210 CA State Paint Re...	25-000-52910-0000-1	424.82
San Joaquin Paint	INV 132104	07/23/2024	INV 132104 Pump Diagnostic ...	01-180-56410-0000-1	538.65
Vendor San Joaquin Paint - San Joaquin Paint Total:					1,137.33
Vendor: SJVA - San Joaquin Valley Air Pollution Control District					
San Joaquin Valley Air Pollutio...	INV S175859	07/16/2024	INV S175859 23/24 Annual Fe...	32-510-53250-0000-1	16.00
San Joaquin Valley Air Pollutio...	INV S177101	07/16/2024	INV S177101 Water Dept. Elec...	32-510-56400-0000-1	900.00
Vendor SJVA - San Joaquin Valley Air Pollution Control District Total:					916.00
Vendor: SC SITES Services - SC SITES Services					
SC SITES Services	Inv. 51944 Repeater Rental Ju...	07/15/2024	Inv. 51944 Repeater Rental Ju...	01-150-52200-0000-1	1,632.00
Vendor SC SITES Services - SC SITES Services Total:					1,632.00
Vendor: The Gas Co. - SoCalGas					
SoCalGas	June 2024 So Cal Gas City Hall...	07/15/2024	June 2024 So Cal Gas City Hall...	01-190-58000-0000-1	4.77
Vendor The Gas Co. - SoCalGas Total:					4.77
Vendor: Solar Energy - Solar Energy of America 1 LLC					
Solar Energy of America 1 LLC	INV 33635522	07/15/2024	INV 33635522 June 2024 Mon...	30-500-58000-0000-1	16,736.72
Vendor Solar Energy - Solar Energy of America 1 LLC Total:					16,736.72
Vendor: SPD - SPD					
SPD	Inv. 3215	07/23/2024	Inv. 3215 Mobile Vendor Perm...	01-150-57400-0000-1	64.95
Vendor SPD - SPD Total:					64.95
Vendor: Spectrum - Spectrum					
Spectrum	INV119560501070124	07/16/2024	Spectrum July 24 Monthly INV...	01-130-54800-0000-1	1,190.00
Vendor Spectrum - Spectrum Total:					1,190.00
Vendor: S.W.R.C.B - State Water Resources Control Board					
State Water Resources Control...	03_12_23C_021	07/23/2024	State Water Resources Control...	32-510-53250-0000-1	5,000.00
State Water Resources Control...	INV0027602	07/23/2024	General Order Increased Fee ...	30-500-53250-0000-1	293.00
Vendor S.W.R.C.B - State Water Resources Control Board Total:					5,293.00
Vendor: Telstar Instruments - Telstar Instruments					
Telstar Instruments	INV 122323	07/23/2024	INV 122323 Pump Troublesho...	30-500-56000-7820-1	1,322.00
Vendor Telstar Instruments - Telstar Instruments Total:					1,322.00

Expense Approval Report

Payment Dates: 7/13/2024 - 7/26/2024

Vendor Name	Payable Number	Post Date	Description (Item)	Account Number	Amount
Vendor: TGLX, Inc - Truck Gear by Line-X of Delano					
Truck Gear by Line-X of Delano	INV 7236	07/15/2024	INV 7236 WW Safety Equipm...	30-500-56800-0000-1	834.84
Truck Gear by Line-X of Delano	INV 7209	07/23/2024	INV 7209 Led Bar with Flashers	30-500-56800-0000-1	875.69
Vendor TGLX, Inc - Truck Gear by Line-X of Delano Total:					1,710.53
Vendor: ULINE - ULINE					
ULINE	INV 180224367	07/16/2024	INV 180224367 WWTP Operat...	30-500-57400-0000-1	151.65
ULINE	INV 180149299	07/23/2024	INV 180149299 WWTP Office ...	30-500-57200-0000-1	153.28
Vendor ULINE - ULINE Total:					304.93
Vendor: ultrex management - Ultrex Management Services LLC					
Ultrex Management Services L...	Inv 4125453	07/23/2024	Inv 4125453 CN29305-01 (Squ...	01-150-52200-0000-1	109.08
Vendor ultrex management - Ultrex Management Services LLC Total:					109.08
Vendor: UNWIREDBROADBAND - unWired Broadband LLC					
unWired Broadband LLC	INV02047848	07/16/2024	INV02047848 Internet Monthl...	01-155-57800-0000-1	144.99
unWired Broadband LLC	INV02047848	07/16/2024	INV02047848 Internet Monthl...	30-500-57800-0000-1	145.00
Vendor UNWIREDBROADBAND - unWired Broadband LLC Total:					289.99
Vendor: US Bank - US Bank					
US Bank	INV0027600	07/23/2024	McFarland IA2017 Debt Servic...	54-000-54600-0000-1	78,850.00
Vendor US Bank - US Bank Total:					78,850.00
Vendor: Verizon - Verizon Connect					
Verizon Connect	INV0027599	07/23/2024	Monthly GPS Invoice - July 20...	01-180-57800-0000-1	99.96
Verizon Connect	INV0027599	07/23/2024	Monthly GPS Invoice - July 20...	20-200-57800-0000-1	46.39
Verizon Connect	INV0027599	07/23/2024	Monthly GPS Invoice - July 20...	30-500-57800-0000-1	46.42
Verizon Connect	INV0027599	07/23/2024	Monthly GPS Invoice - July 20...	32-510-57800-0000-1	82.09
Verizon Connect	INV0027599	07/23/2024	Monthly GPS Invoice - July 20...	34-520-57800-0000-1	46.42
Vendor Verizon - Verizon Connect Total:					321.28
Vendor: waterworkforce - WaterWorkforce Inc					
WaterWorkforce Inc	INV 1182	07/23/2024	INV 1182 Browning Well Emer...	32-510-53800-0000-1	387,646.68
WaterWorkforce Inc	INV 1185	07/23/2024	INV 1185 WaterWork Force	30-500-56000-7820-1	4,182.50
WaterWorkforce Inc	INV 1185	07/23/2024	INV 1185 WaterWork Force	32-510-56000-0000-1	4,182.50
Vendor waterworkforce - WaterWorkforce Inc Total:					396,011.68
Vendor: WILLDAN - WILLDAN					
WILLDAN	INV 010-59037	07/23/2024	INV 010-59037 CFD FY24/25 P...	24-210-52200-0000-1	9,121.51
WILLDAN	INV 010-59038	07/23/2024	LLMD FY24/25	20-200-52200-0000-1	3,205.00
Vendor WILLDAN - WILLDAN Total:					12,326.51
Grand Total:					1,060,803.30

Report Summary

Fund Summary

Fund	Payment Amount
01 - GENERAL FUND	381,359.57
20 - LIGHTING & LANDSCAPING-DISTRICT 1	11,136.94
24 - COMMUNITY FACILITIES DISTRICT	9,121.51
25 - CAPITAL IMPROVEMENTS PROJECTS	424.82
30 - SEWER	58,386.53
31 - REFUSE/RECYCLING	3,167.96
32 - WATER	517,363.13
34 - PUBLIC TRANSPORTATION	992.84
54 - MCFARLAND IMPROVEMENT AUTHORITY	78,850.00
Grand Total:	1,060,803.30

Account Summary

Account Number	Account Name	Payment Amount
01-100-41100-0000-1	Business Licenses	215.00
01-105-52200-0000-1	Contract Services	200.00
01-105-55600-0000-1	Postage	26.57
01-105-57100-0000-1	Special Activities	500.00
01-105-57800-0000-1	Telephone & Communic...	30.97
01-110-55600-0000-1	Postage	26.57
01-110-57800-0000-1	Telephone & Communic...	55.88
01-111-53200-0000-1	Dues & Subscriptions	125.00
01-115-55600-0000-1	Postage	26.70
01-115-57800-0000-1	Telephone & Communic...	72.94
01-130-51200-0000-1	Bank Charges	133.80
01-130-52200-0000-1	Contract Services	518.52
01-130-54800-0000-1	Maintenance Agreements	1,190.00
01-130-55600-0000-1	Postage	26.57
01-130-56000-0000-1	Professional Services - O...	5,486.82
01-130-56100-0000-1	Legal Services	10,091.00
01-130-58900-0000-1	Debt Principal Redeemed	239,129.25
01-140-55600-0000-1	Postage	26.57
01-140-56000-0000-1	Professional Services - O...	3,700.00
01-140-57800-0000-1	Telephone & Communic...	43.93
01-150-52200-0000-1	Contract Services	1,854.74
01-150-53200-0000-1	Dues & Subscriptions	465.00
01-150-55600-0000-1	Postage	26.57
01-150-56000-0000-1	Professional Services - O...	1,750.42
01-150-56400-0000-1	Repairs & Maint - Build &..	485.00
01-150-56600-0000-1	Repairs & Maintenance -...	2,558.16
01-150-57400-0000-1	Supplies - Operating	64.95
01-150-57800-0000-1	Telephone & Communic...	512.23
01-155-55600-0000-1	Postage	26.57
01-155-56600-0000-1	Repairs & Maintenance -...	85.14
01-155-57800-0000-1	Telephone & Communic...	167.39
01-160-51400-0000-1	Building Plan Check/Ins...	11,490.63
01-160-55600-0000-1	Postage	26.57
01-160-57800-0000-1	Telephone & Communic...	22.40
01-165-55600-0000-1	Postage	26.57
01-165-56000-0000-1	Professional Services-Ot...	62.62
01-165-57800-0000-1	Telephone & Communic...	94.00
01-175-55600-0000-1	Postage	26.57
01-175-57800-0000-1	Telephone & Communic...	43.93
01-180-56000-0000-1	Professional Services - O...	3,907.03
01-180-56410-0000-1	Repairs & Maintenance ...	538.65
01-180-56430-0000-1	Repairs & Maintenance -...	4,870.22
01-180-56500-0000-1	Repairs/Maintenance St...	3,094.96
01-180-56600-0000-1	Repairs/Maintenance - ...	1,176.18

Account Summary

Account Number	Account Name	Payment Amount
01-180-57200-0000-1	Supplies - Office	438.60
01-180-57400-0000-1	Supplies - Operating	9,889.15
01-180-57800-0000-1	Telephone & Communic...	180.96
01-180-58000-0000-1	Utilities	4,255.81
01-180-58100-0000-1	Street Lighting	5,755.94
01-185-56400-0000-1	Repairs & Maint - Build &..	140.26
01-185-58000-0000-1	Utilities	3,465.65
01-190-52200-0000-1	Contract Services	1,200.00
01-190-56400-0000-1	Repairs & Maint - Build &..	333.71
01-190-58000-0000-1	Utilities	8,012.16
01-20800-0000-1	Pension Payable	14,740.21
01-22050-0000-1	Federal Withholding Pay...	8,320.98
01-22100-0000-1	FICA Payable	13,349.22
01-22150-0000-1	Medicare Payable	3,122.06
01-22200-0000-1	State Withholding Payab...	4,822.83
01-22250-0000-1	SUTA Payable	118.19
01-22275-0000-1	ETT Payable	2.52
01-22600-0000-1	Health FSA	19.23
01-22700-0000-1	Disablity LTD	172.52
01-22800-0000-1	Accident	19.34
01-22900-0000-1	Life	89.89
01-22950-0000-1	Cancer-American Fidelity	13.53
01-24000-0000-1	Deposits	350.00
01-310-52200-0000-1	Contract Services	7,544.22
20-200-52200-0000-1	Contract Services	3,205.00
20-200-57400-0000-1	Supplies - Operating	522.98
20-200-57800-0000-1	Telephone & Communic...	56.05
20-200-58100-0000-1	Street Lighting	6,242.98
20-20800-0000-1	Pension Payable	425.62
20-22050-0000-1	Federal Withholding Pay...	113.86
20-22100-0000-1	FICA Payable	400.12
20-22150-0000-1	Medicare Payable	93.58
20-22200-0000-1	State Withholding Payab...	70.42
20-22900-0000-1	Life	6.33
24-210-52200-0000-1	Contract Services	9,121.51
25-000-52910-0000-1	Buildings & Improvemen...	424.82
30-20800-0000-1	Pension Payable	2,356.50
30-22050-0000-1	Federal Withholding Pay...	916.25
30-22100-0000-1	FICA Payable	2,583.50
30-22150-0000-1	Medicare Payable	604.22
30-22200-0000-1	State Withholding Payab...	804.52
30-22250-0000-1	SUTA Payable	6.01
30-22275-0000-1	ETT Payable	0.13
30-22700-0000-1	Disablity LTD	35.69
30-22800-0000-1	Accident	27.45
30-22900-0000-1	Life	35.80
30-500-51200-0000-1	Bank Charges	133.80
30-500-53250-0000-1	Permits & Certificates	293.00
30-500-55600-0000-1	Postage	26.57
30-500-56000-7820-1	Professional Services - ...	24,054.33
30-500-56400-0000-1	Repairs & Maint - Build &..	4,902.70
30-500-56600-0000-1	Repairs & Maintenance -...	681.39
30-500-56800-0000-1	Safety Equipment	1,710.53
30-500-57200-0000-1	Supplies - Office	153.28
30-500-57400-0000-1	Supplies - Operating	358.71
30-500-57800-0000-1	Telephone & Communic...	894.83
30-500-58000-0000-1	Utilities	17,807.32
31-20800-0000-1	Pension Payable	1,058.44

Account Summary

Account Number	Account Name	Payment Amount
31-22050-0000-1	Federal Withholding Pay...	354.51
31-22100-0000-1	FICA Payable	944.32
31-22150-0000-1	Medicare Payable	220.84
31-22200-0000-1	State Withholding Payab...	325.82
31-22250-0000-1	SUTA Payable	6.01
31-22275-0000-1	ETT Payable	0.13
31-22700-0000-1	Disablity LTD	11.64
31-22900-0000-1	Life	8.10
31-505-51200-0000-1	Bank Charges	133.80
31-505-55600-0000-1	Postage	26.57
31-505-57800-0000-1	Telephone & Communic...	77.78
32-20800-0000-1	Pension Payable	2,433.64
32-22050-0000-1	Federal Withholding Pay...	661.14
32-22100-0000-1	FICA Payable	2,600.12
32-22150-0000-1	Medicare Payable	608.04
32-22200-0000-1	State Withholding Payab...	621.49
32-22250-0000-1	SUTA Payable	6.03
32-22275-0000-1	ETT Payable	0.12
32-22700-0000-1	Disablity LTD	14.31
32-22900-0000-1	Life	9.02
32-510-51200-0000-1	Bank Charges	133.80
32-510-53250-0000-1	Permits & Certificates	5,016.00
32-510-53800-0000-1	Equipment Rental	387,646.68
32-510-55600-0000-1	Postage	26.57
32-510-56000-0000-1	Professional Services - O...	27,050.71
32-510-56400-0000-1	Repairs & Maint - Build &...	900.00
32-510-56410-0000-1	Repairs & Maintenance- ...	782.12
32-510-56600-0000-1	Repairs & Maintenance -...	1,026.72
32-510-57200-0000-1	Supplies - Office	230.61
32-510-57400-0000-1	Supplies - Operating	7,628.21
32-510-57800-0000-1	Telephone & Communic...	540.31
32-510-58000-0000-1	Utilities	76,687.10
32-510-58200-0000-1	Water/Soil/Other Analys...	2,740.39
34-20800-0000-1	Pension Payable	321.33
34-22050-0000-1	Federal Withholding Pay...	121.63
34-22100-0000-1	FICA Payable	229.02
34-22150-0000-1	Medicare Payable	53.56
34-22200-0000-1	State Withholding Payab...	46.90
34-22700-0000-1	Disablity LTD	30.76
34-22800-0000-1	Accident	15.41
34-22900-0000-1	Life	57.99
34-22950-0000-1	Cancer-American Fidelity	24.77
34-520-57800-0000-1	Telephone & Communic...	91.47
54-000-54600-0000-1	Interest Expense	78,850.00
Grand Total:		1,060,803.30

Project Account Summary

Project Account Key	Payment Amount
None	1,060,803.30
Grand Total:	1,060,803.30



Payroll Set: City-City of McFarland

Department: 105 - City Council

Employee Number	Pay Code	# of Payments	Units	Pay Amount
AYO300	Salary - Elected - Salary - Electec	1	0	200
	Total:		0	200
Ayo100	Salary - Elected - Salary - Electec	1	0	200
	Total:		0	200
Cano100	Salary - Elected - Salary - Electec	1	0	200
	Total:		0	200
GON610	Salary - Elected - Salary - Electec	1	0	200
	Total:		0	200
PER100	Salary - Elected - Salary - Electec	1	0	200
	Total:		0	200
105 - City Council Total:			0	1000

Department: 110 - City Administration

Employee Number	Pay Code	# of Payments	Units	Pay Amount
AYN100	Hourly - Temp - Hourly Tempora	1	51.08	817.28
	Total:		51.08	817.28
Nun100	Bilingual - Bilingual	2	0	27.7
	Comp Time Earned - Comp Time	2	13.5	0
	Holiday - Holiday Pay	1	9	261.44
	Hourly - Hourly	2	138	3980.35
	Hourly - Reg - Hourly - Regular	2	0.91	26.43
	Live Scan - Live Scan	2	0	27.7
	OT - Overtime	2	0.5	21.61
	Sick - Sick Pay	1	7	203.34
	Vacation - Vacation Pay	2	6	174.29
	Total:		174.91	4722.86

VIR100	Holiday - Holiday Pay	1	8	711.54
	Hourly - Hourly	1	72	6403.84
	Salary - Salary	1	80	7115.38
	Total:		160	14230.76
	110 - City Administration Total:		385.99	19770.9

Department: 111 - City Clerk

Employee Number	Pay Code	# of Payments	Units	Pay Amount
ALV100	Bilingual - Bilingual	1	0	13.85
	Cash Out - Pers Day - Cash Out -	1	9	274.63
	Cash Out - VAC - Cash Out - Vac	1	111.13	3391.03
	Hourly - Hourly	1	27	823.88
	Total:		147.13	4503.39
	111 - City Clerk Total:		147.13	4503.39

Department: 112 - Human Resources

Employee Number	Pay Code	# of Payments	Units	Pay Amount
MCC100	Holiday - Holiday Pay	1	8	365.39
	Hourly - Hourly	2	120	5480.78
	Sick - Sick Pay	2	32	1461.55
	Total:		160	7307.72
	112 - Human Resources Total:		160	7307.72

Department: 115 - Finance & Accounting

Employee Number	Pay Code	# of Payments	Units	Pay Amount
ARC100	Holiday - Holiday Pay	1	8	362.38
	Hourly - Hourly	1	72	3217.27
	Salary - Salary	1	89.42	3623.85
	Total:		169.42	7203.5
ARR100	Holiday - Holiday Pay	1	9	171.77
	Hourly - Hourly	2	120.25	2278.51
	Hourly - Reg - Hourly - Regular	1	2.34	44.66
	Vacation - Vacation Pay	2	27	512.98
	Total:		158.59	3007.92

ESP100	Bachelor's Degree - Bachelor's D	2	0	18.46
	Bilingual - Bilingual	2	0	27.7
	Holiday - Holiday Pay	1	9	303.13
	Hourly - Hourly	2	115	3852.42
	Hourly - Reg - Hourly - Regular	2	7.01	232.14
	OT - Overtime	1	2.08	105.09
	Sick - Sick Pay	2	27	902.01
	Vacation - Vacation Pay	1	9	295.74
	Total:		169.09	5736.69
FER100	Hourly - Temp - Hourly Tempora	1	24	384
	Total:		24	384
GON600	Bilingual - Bilingual	2	0	27.7
	Comp Time Earned - Comp Time	1	0.63	0
	Holiday - Holiday Pay	1	9	261.44
	Hourly - Hourly	2	141.59	4082.04
	Hourly - Reg - Hourly - Regular	1	0.08	2.32
	Sick - Sick Pay	1	9.41	273.35
	Total:		160.71	4646.85
TOR100	Comp Time Taken - Comp Time	2	19.22	466.13
	Holiday - Holiday Pay	1	9	219.92
	Hourly - Hourly	2	97.84	2370.5
	Sick - Sick Pay	2	10.21	249.49
	Vacation - Vacation Pay	1	23.73	579.87
	Total:		160	3885.91
VAC110	Hourly - Temp - Hourly Tempora	2	156.17	2816.61
	OT - Overtime	2	9.24	249.86
	Total:		165.41	3066.47
115 - Finance & Accounting Total:			1007.22	27931.34

Department: 140 - Planning

Employee Number	Pay Code	# of Payments	Units	Pay Amount
ARA100	Hourly - Temp - Hourly Tempora	1	39.5	632
	Total:		39.5	632
DEL100	Bachelor's Degree - Bachelor's D	2	0	18.46
	Holiday - Holiday Pay	1	9	388
	Hourly - Hourly	1	36	1514.16
	Notary - Notary	2	0	27.7
	Personal - Personal Day	1	8	336.48
	Salary - Salary	1	82.1	3448.92
	Vacation - Vacation Pay	1	23.35	1006.65
	Total:		158.45	6740.37

SALD100	Holiday - Holiday Pay	1	8	403.85
	Hourly - Hourly	1	72	3634.61
	Salary - Salary	1	80	4038.46
	Total:		160	8076.92
	140 - Planning Total:		357.95	15449.29

Department: 150 - Police

Employee Number	Pay Code	# of Payments	Units	Pay Amount
ALB100-142	Comp Time Earned PD - Comp T	1	4	0
	Comp Time Taken PD - Comp Tir	1	4	131.45
	Holiday - Holiday Pay	1	12	394.34
	Hourly - Hourly	2	152	4956.48
	OT - Overtime	2	25	1232.31
	Total:		197	6714.58
ALW100-145	Holiday - Holiday Pay	1	12	394.34
	Hourly - Hourly	2	132	4308.87
	Intermediate POST - Intermedia	2	0	46.16
	OT - Overtime	2	37.5	1838.85
	Personal - Personal Day	1	12	384.72
	Sick - Sick Pay	1	12	394.34
	Total:		205.5	7367.28
CAZ100-151	Bilingual - Bilingual	2	0	92.3
	Holiday - Holiday Pay	1	12	375.4
	Hourly - Hourly	2	120	3735.65
	OT - Overtime	1	20.5	961.95
	PD - Court Appear - PD - Court A	1	11.5	539.63
	Sick - Sick Pay	2	36	1107.88
	Total:		200	6812.81
DEW100-147	Cash Out - VAC - Cash Out - Vac	1	60	2402.19
	Holiday - Holiday Pay	1	12	480.44
	Hourly - Hourly	2	156	6198.83
	OT - Overtime	2	36.5	2180.28
	PD - Court Appear - PD - Court A	2	14	837.11
	Total:		278.5	12098.85
EST150	Comp Time Taken PD - Comp Tir	1	3	91.56
	Holiday - Holiday Pay	1	12	375.4
	Hourly - Hourly	2	153	4752.73
	OT - Overtime	2	32.5	1515.32
	PD - Court Appear - PD - Court A	1	7	328.47
	Total:		207.5	7063.48

[GAL100-149](#)

Holiday - Holiday Pay	1	12	435.3
Hourly - Hourly	2	156	5616.39
Intermediate POST - Intermedia	2	0	46.16
OT - Overtime	2	32	1741.19
PD - Court Appear - PD - Court A	1	3	159.26
PD - Court Stand-by - PD Court S	1	3	163.24
Total:		206	8161.54

[GAR100-114](#)

Bilingual - Bilingual	2	0	92.3
Hourly - Hourly	2	116	2674.58
Total:		116	2766.88

[GAR100-150](#)

Advanced POST - Advanced POS	2	0	69.24
Holiday - Holiday Pay	1	8	336.53
Hourly - Hourly	2	152	6352.99
OT - Overtime	2	23.5	1478.21
Total:		183.5	8236.97

[HAN100-112](#)

Holiday - Holiday Pay	1	12	435.3
Hourly - Hourly	2	156	5616.39
OT - Overtime	2	44.5	2400.1
Total:		212.5	8451.79

[HAS100-143](#)

Holiday - Holiday Pay	1	12	252.77
Hourly - Hourly	2	136	2846.18
OT - Overtime	2	18	568.72
Sick - Sick Pay	1	12	252.77
Total:		178	3920.44

[KNO100](#)

Holiday - Holiday Pay	1	8	461.54
Salary - Salary	1	80	4615.38
Vacation - Vacation Pay	1	72	4153.84
Total:		160	9230.76

[LOP125](#)

Bachelor's Degree - Bachelor's D	2	0	46.16
Bilingual - Bilingual	2	0	92.3
Holiday - Holiday Pay	1	10	269.68
Hourly - Hourly	2	136	3645.91
OT - Overtime	2	30	1212.57
Standby - Standby	2	0	385.77
Vacation - Vacation Pay	2	14	372.94
Total:		190	6025.33

[MUL100](#)

Advanced POST - Advanced POS	2	0	69.24
Bachelor's Degree - Bachelor's D	2	0	46.16
Holiday - Holiday Pay	1	12	457.31
Hourly - Hourly	2	156	5900.47
OT - Overtime	1	28	1578.29
Total:		196	8051.47

[NIN100](#)

Holiday - Holiday Pay	1	10	244.36
Hourly - Hourly	2	150	3641.56
OT - Overtime	1	8.5	311.56
Total:		168.5	4197.48

[OLM100](#)

Advanced POST - Advanced POS	2	0	69.24
Bachelor's Degree - Bachelor's D	2	0	46.16
Hourly - Hourly	1	68	3432.64
Salary - Salary	1	80	4038.4
Vacation - Vacation Pay	1	12	605.76
Total:		160	8192.2

[PES100-152](#)

SRO - School Resource Officer	2	152	5478.37
SRO Holiday - School Resource O	1	8	290.2
SRO-OT - School Resource Office	1	9	489.71
Total:		169	6258.28

[RIV100-120](#)

Admin Leave - Admin Leave	2	152	5478.37
Holiday - Holiday Pay	1	8	290.2
Total:		160	5768.57

[SHA-100-152](#)

Advanced POST - Advanced POS	2	0	69.24
Bachelor's Degree - Bachelor's D	2	0	46.16
Cash Out - Comp PD - Cash Out -	1	80	3202.92
Holiday - Holiday Pay	1	12	480.44
Hourly - Hourly	2	156	6191.01
OT - Overtime	2	49.5	2949.27
Total:		297.5	12939.04

[TAF200](#)

Comp Time Earned PD - Comp T	1	1.5	0
Comp Time Taken PD - Comp Tir	2	54	1818.8
Holiday - Holiday Pay	1	12	404.18
Hourly - Hourly	2	94	3133.2
OT - Overtime	1	7	347.49
Total:		168.5	5703.67

[VEL200](#)

Bilingual - Bilingual	2	0	92.3
Holiday - Holiday Pay	1	12	279.09
Hourly - Hourly	2	148	3414.85
OT - Overtime	2	42	1461.81
Total:		202	5248.05

[WEIS100](#)

Holiday - Holiday Pay	1	10	362.75
Hourly - Hourly	2	150	5405.82
K-9 Officer - K-9 Officer	2	0	36.92
OT - Overtime	2	53	2878.53
Total:		213	8684.02

[WIL100-150](#)

Hourly - Hourly	1	16.41	2461.5
Total:		16.41	2461.5
150 - Police Total:		4085.41	154354.99

Department: 155 - Animal Control

Employee Number	Pay Code	# of Payments	Units	Pay Amount
MUN100	Holiday - Holiday Pay	1	9	171.77
	Hourly - Hourly	2	151	2863.29
	OT - Overtime	2	57.58	1637.25
	Standby - Standby	2	0	200
	Total:		217.58	4872.31
	155 - Animal Control Total:		217.58	4872.31

Department: 165 - Code Enforcement

Employee Number	Pay Code	# of Payments	Units	Pay Amount
PER200	Holiday - Holiday Pay	1	9	267.89
	Hourly - Hourly	2	142	4194.83
	Hourly - Reg - Hourly - Regular	1	0.25	7.44
	OT - Overtime	2	4.43	196.07
	Sick - Sick Pay	1	9	267.89
	Total:		164.68	4934.12
	165 - Code Enforcement Total:		164.68	4934.12

Department: 175 - Grants Administration

Employee Number	Pay Code	# of Payments	Units	Pay Amount
MAR210	Holiday - Holiday Pay	1	9	189.67
	Hourly - Hourly	2	111	2339.21
	OT - Overtime	1	0.25	7.9
	Vacation - Vacation Pay	1	40	822.4
	Total:		160.25	3359.18
McG100	Holiday - Holiday Pay	1	9	274.63
	Hourly - Hourly	2	145.83	4420.68
	OT - Overtime	2	1.92	87.88
	Total:		156.75	4783.19
	175 - Grants Administration Total:		317	8142.37

Department: 180 - Public Works

Employee Number	Pay Code	# of Payments	Units	Pay Amount
CABR100	Holiday - Holiday Pay	1	8	300
	Hourly - Hourly	2	128	4800
	Sick - Sick Pay	2	24	900
	Total:		160	6000
CORT100	Cash Out - Comp - Cash Out - Co	1	39.99	782.2
	Holiday - Holiday Pay	1	9	176.04
	Hourly - Hourly	2	143	2723.48
	Hourly - Reg - Hourly - Regular	1	8	143.6
	OT - Overtime	2	59.75	1714.65
	Personal - Personal Day	1	8	141.76
	Total:		267.74	5681.73
DRA100	Bachelor's Degree - Bachelor's D	2	0	18.46
	Comp Time Earned - Comp Time	1	2.24	0
	Holiday - Holiday Pay	1	9	171.81
	Hourly - Hourly	2	133	2510.45
	Hourly - Reg - Hourly - Regular	2	2.5	45.59
	Personal - Personal Day	1	9	163.53
	Sick - Sick Pay	1	9	171.81
	Total:		164.74	3081.65
GUE100	Cash Out - Comp - Cash Out - Co	1	39.99	1220.26
	Holiday - Holiday Pay	1	9	274.63
	Hourly - Hourly	2	151	4577.88
	OT - Overtime	2	34	1532.79
	Total:		233.99	7605.56
HER400	Holiday - Holiday Pay	1	8	500
	Hourly - Hourly	1	64	4000
	Salary - Salary	1	80	5000
	Sick - Sick Pay	1	8	500
	Total:		160	10000
TEL100	Holiday - Holiday Pay	1	9	184.95
	Hourly - Hourly	2	133	2655.95
	OT - Overtime	2	41	1205.93
	Sick - Sick Pay	1	9	184.95
	Vacation - Vacation Pay	1	9	184.95
	Total:		201	4416.73

ZUN100	Holiday - Holiday Pay	1	9	176.04
	Hourly - Hourly	2	113.52	2155.89
	OT - Overtime	1	2	53.16
	Total:		124.52	2385.09
	180 - Public Works Total:		1311.99	39170.76

Department: 190 - Facilities Maintenance

Employee Number	Pay Code	# of Payments	Units	Pay Amount
DOM100	Comp Time Earned - Comp Time	1	15.69	0
	Holiday - Holiday Pay	1	9	194.37
	Hourly - Hourly	2	151	3237.89
	OT - Overtime	2	4.11	132.82
	Total:		179.8	3565.08
	190 - Facilities Maintenance Total:		179.8	3565.08

Department: 200 - Lighting & Landscaping

Employee Number	Pay Code	# of Payments	Units	Pay Amount
Cruz100	Comp Time Earned - Comp Time	1	33.38	0
	Comp Time Taken - Comp Time	1	27	502.74
	Holiday - Holiday Pay	1	9	184.95
	Hourly - Hourly	2	104	2137.2
	Hourly - Reg - Hourly - Regular	2	1.17	24.04
	Sick - Sick Pay	2	11	210.61
	Vacation - Vacation Pay	1	9	167.58
	Total:		194.55	3227.12
Sanch100	Comp Time Taken - Comp Time	1	39.99	728.86
	Holiday - Holiday Pay	1	9	167.58
	Hourly - Hourly	1	62	1154.44
	Sick - Sick Pay	1	18	335.16
	Total:		128.99	2386.04
	200 - Lighting & Landscaping Total:		323.54	5613.16

Department: 500 - Sewer

Employee Number	Pay Code	# of Payments	Units	Pay Amount
CIS400	Holiday - Holiday Pay	1	9	288.56
	Hourly - Hourly	2	131	4167.28
	OT - Overtime	2	27	1291.48
	Sick - Sick Pay	2	20	639.68
	Total:		187	6387

HER300	Holiday - Holiday Pay	1	9	176.11
	Hourly - Hourly	2	151	2935.56
	OT - Overtime	2	8.67	251.61
	Standby - Standby	2	0	171.45
	Total:		168.67	3534.73
MED100	Holiday - Holiday Pay	2	9	231.04
	Hourly - Hourly	3	138	3639.09
	OT - Overtime	2	6	241.71
	Personal - Personal Day	2	4	107.28
	PW Cert - Grade 2 - Public Work	2	0	69.23
	Sick - Sick Pay	2	9	247.05
	Standby - Standby	2	0	100.03
	Total:		166	4635.43
Pop100	Holiday - Holiday Pay	1	9	214.57
	Hourly - Hourly	2	150	3551.22
	OT - Overtime	2	17	601.85
	PW Cert - Grade 1 - Public Work	2	0	23.08
	Sick - Sick Pay	1	1	23.26
	Standby - Standby	2	0	128.58
	Total:		177	4542.56
500 - Sewer Total:			698.67	19099.72

Department: 510 - Water

Employee Number	Pay Code	# of Payments	Units	Pay Amount
CAR100	Comp Time Earned - Comp Time	2	13.5	0
	Comp Time Taken - Comp Time	2	3.5	92.75
	Holiday - Holiday Pay	1	9	242.71
	Hourly - Hourly	2	147.5	3950.39
	Hourly - Reg - Hourly - Regular	2	3.5	92.75
	OT - Overtime	2	94.98	3812.74
	Standby - Standby	2	0	200
	Total:		271.98	8391.34
CORD100	Holiday - Holiday Pay	1	9	167.62
	Hourly - Hourly	2	151	2789.59
	OT - Overtime	2	69.35	1920.17
	Standby - Standby	2	0	214.32
	Total:		229.35	5091.7

[HIG400](#)

Holiday - Holiday Pay	1	9	334.59
Hourly - Hourly	2	151	5573.34
OT - Overtime	2	54.24	2984.47
PW Cert - Grade 3 - Public Work	2	0	69.24
Total:		214.24	8961.64
510 - Water Total:		715.57	22444.68

Department: 520 - Public Transit

Employee Number

[MOR100](#)

Pay Code	# of Payments	Units	Pay Amount
Holiday - Holiday Pay	1	9	199.26
Hourly - Hourly	2	135	2893.44
Hourly - Reg - Hourly - Regular	1	3.42	75.72
OT - Overtime	1	0.33	10.96
Sick - Sick Pay	1	9	199.26
Vacation - Vacation Pay	1	7	136.92
Total:		163.75	3515.56
520 - Public Transit Total:		163.75	3515.56
Report Total:		10236.28	341675.39



Payroll Set: City-City of McFarland

Account	Account Description	Units	Pay Amount
	BENEFIT AND NON GL TRANSACTIONS	84.44	0
	- Total:	84.44	0
01-105-50100-0000-1	Salaries - Permanent Employees	0	1000
01-110-50100-0000-1	Salaries - Permanent Employees	100.46	4101.78
01-110-50150-0000-1	Wages - Temporary Employees	51.08	817.28
01-110-50200-0000-1	Overtime	0.26	10.81
01-110-50350-0000-1	Stipends	0	27.72
01-111-50100-0000-1	Salaries - Permanent Employees	58.85	1795.81
01-111-50350-0000-1	Stipends	0	33.22
01-112-50100-0000-1	Salaries - Permanent Employees	40	1826.94
01-115-50100-0000-1	Salaries - Permanent Employees	117.66	4836.68
01-115-50200-0000-1	Overtime	0.21	10.51
01-115-50350-0000-1	Stipends	0	8.32
01-140-50100-0000-1	Salaries - Permanent Employees	302.75	12518.52
01-140-50150-0000-1	Wages - Temporary Employees	39.5	632
01-140-50350-0000-1	Stipends	0	48
01-150-50100-0000-1	Salaries - Permanent Employees	3625.1	128353.66
01-150-50200-0000-1	Overtime	535.5	27173.87
01-150-50350-0000-1	Stipends	0	1161.17
01-155-50100-0000-1	Salaries - Permanent Employees	160	3035.06
01-155-50200-0000-1	Overtime	57.58	1637.25
01-155-50350-0000-1	Stipends	0	200
01-160-50100-0000-1	Salaries - Permanent Employees	176.23	5328.1
01-160-50200-0000-1	Overtime	2.22	98.04
01-165-50100-0000-1	Salaries - Permanent Employees	154.61	4688.44
01-165-50200-0000-1	Overtime	1.62	71.56
01-175-50100-0000-1	Salaries - Permanent Employees	154.83	4695.31
01-175-50200-0000-1	Overtime	1.92	87.88
01-180-50100-0000-1	Salaries - Permanent Employees	764.75	18906.72
01-180-50200-0000-1	Overtime	135.73	4460.55
01-180-50350-0000-1	Stipends	0	1.84
01-190-50100-0000-1	Salaries - Permanent Employees	160	3432.26
01-190-50200-0000-1	Overtime	4.11	132.82
	01 - GENERAL FUND Total:	6644.97	231132.12
20-200-50100-0000-1	Salaries/Permanent Employees	296.16	5795.34
20-200-50200-0000-1	Overtime	1.02	45.98
	20 - LIGHTING & LANDSCAPING-DISTRICT 1 Total:	297.18	5841.32
30-500-50100-0000-1	Salaries - Permanent Employees	1188.99	37456.31

Account	Account Description	Units	Pay Amount
30-500-50150-0000-1	Wages - Temporary Employees	59.52	1057.34
30-500-50200-0000-1	Overtime	62.64	2513.87
30-500-50350-0000-1	Stipends	0	353.19
30 - SEWER Total:		1311.15	41380.71
31-505-50100-0000-1	Salaries - Permanent Employees	353.77	13841.18
31-505-50150-0000-1	Wages - Temporary Employees	59.52	1057.34
31-505-50200-0000-1	Overtime	3.67	113.98
31-505-50350-0000-1	Stipends	0	6.48
31 - REFUSE/RECYCLING Total:		416.96	15018.98
32-510-50100-0000-1	Salaries - Permanent Employees	1034.07	34352.15
32-510-50150-0000-1	Wages - Temporary Employees	61.13	1085.93
32-510-50200-0000-1	Overtime	222.63	8847.09
32-510-50350-0000-1	Stipends	0	501.53
32 - WATER Total:		1317.83	44786.7
34-520-50100-0000-1	Salaries - Permanent Employees	163.42	3504.6
34-520-50200-0000-1	Overtime	0.33	10.96
34 - PUBLIC TRANSPORTATION Total:		163.75	3515.56
Report Total:		10236.28	341675.39



Payroll Set: City-City of McFarland

Pay Code	Description	# of Payments	Units	Pay Amount
Admin Leave - Admin Lea	Admin Leave	2	152	5478.37
Advanced POST - Advanc	Advanced POST Certificate	8	0	276.96
Bachelor's Degree - Bach	Bachelor's Degree	14	0	240.02
Bilingual - Bilingual	Bilingual	15	0	466.15
Cash Out - Comp - Cash O	Cash Out - Comp Time	2	79.98	2002.46
Cash Out - Comp PD - Cas	Cash Out - Comp PD	1	80	3202.92
Cash Out - Pers Day - Cas	Cash Out - Pers Day	1	9	274.63
Cash Out - VAC - Cash Ou	Cash Out - Vacation	2	171.13	5793.22
Comp Time Earned - Com	Comp Time Earned	8	78.94	0
Comp Time Earned PD - (	Comp Time Earned PD	2	5.5	0
Comp Time Taken - Comp	Comp Time Taken	6	89.71	1790.48
Comp Time Taken PD - Cc	Comp Time Taken PD	4	61	2041.81
Holiday - Holiday Pay	Holiday Pay	51	480	15267.02
Hourly - Hourly	Hourly	96	6401.94	195195.51
Hourly - Reg - Hourly - Re	Hourly - Regular	15	29.18	694.69
Hourly - Temp - Hourly Te	Hourly Temporary Employees	5	270.75	4649.89
Intermediate POST - Inter	Intermediate POST Certificate	4	0	92.32
K-9 Officer - K-9 Officer	K-9 Officer	2	0	36.92
Live Scan - Live Scan	Live Scan	2	0	27.7
Notary - Notary	Notary	2	0	27.7
OT - Overtime	Overtime	64	982.43	42716.45
PD - Court Appear - PD - C	PD - Court Appearance	5	35.5	1864.47
PD - Court Stand-by - PD (	PD Court Stand-by	1	3	163.24
Personal - Personal Day	Personal Day	6	41	1133.77
PW Cert - Grade 1 - Public	Public Works Certification - Grade 1	2	0	23.08
PW Cert - Grade 2 - Public	Public Works Certification - Grade 2	2	0	69.23
PW Cert - Grade 3 - Public	Public Works Certification - Grade 3	2	0	69.24
Salary - Salary	Salary	7	571.52	31880.39
Salary - Elected - Salary - I	Salary - Elected Officials	5	0	1000
Sick - Sick Pay	Sick Pay	27	272.62	8524.4
SRO - School Resource O	School Resource Officer	2	152	5478.37
SRO Holiday - School Res	School Resource Officer Holiday Pay	1	8	290.2
SRO-OT - School Resource	School Resource Officer Overtime	1	9	489.71
Standby - Standby	Standby	14	0	1400.15
Vacation - Vacation Pay	Vacation Pay	15	252.08	9013.92
Report Total:			10236.28	341675.39



City of McFarland

City Council Meeting

STAFF REPORT

Agenda Item No. 6.
Section: CONSENT AGENDA
Meeting Date: August 8, 2024

TO: Honorable Mayor and Council Members

FROM: Diego Viramontes, City Manager
Paul Saldaña , Community Development Director

SUBJECT: Second reading, by title only, and adopt Ordinance 6-2024 AN ORDINANCE OF THE CITY OF MCFARLAND AMENDING THE MCFARLAND MUNICIPAL CODE CHAPTER 2.04.101 RELATING TO CITY COUNCIL MEETINGS

SUMMARY:

The City Council meetings are currently held on the 2nd and 4th Thursdays of the month. The proposed ordinance would change the meeting days to the 2nd and 4th Wednesdays of each month. The time 6:00 pm would remain the same.

The ordinance was introduced following a public hearing on July 25, 2024. Following adoption, the ordinance will take Therefore, the first meeting under the new schedule would be September 11, 2024.

FINANCIAL IMPACT:

No financial impact

RECOMMENDATION:

City Council adopt, by title only, Ordinance 6-2024.

ATTACHMENTS:

None

ORDINANCE NO. 6-2024

AN ORDINANCE OF THE CITY OF MCFARLAND AMENDING THE MCFARLAND MUNICIPAL CODE CHAPTER 2.04.101

Section 1. Recitals

WHEREAS, The City of McFarland desires to amend, clarify, and codify its Municipal Code Chapter related to city council meetings;

WHEREAS, The Ordinance updates the Municipal Code to change the regular meeting date for City Council meetings.

**NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF MCFARLAND DOES ORDAIN
AS FOLLOWS:**

Section 1. Section 2.04.010 of the McFarland Municipal Code is hereby adopted, amended and restated to read as follows:

2.04.010 - Time Set for meetings.

The second and fourth Wednesday of each and every month at the hour of six (6) p.m. is established as the time for the regular meeting of the City Council.

Section 2. Notice. The City clerk shall certify to the passage and adoption of this ordinance and shall cause this Ordinance to be posted within 15 days after its passage, in accordance with Section 36933 of the Government Code.

Section 3. Severability. If any section, subsection, sentence, clause, phrase, or word of this Ordinance is, for any reason, deemed or held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, or preempted by legislative enactment, such decision or legislation shall not affect the validity of the remaining portions of this Ordinance. The City Council of the City of McFarland hereby declares that it would have adopted this Ordinance and each section, subsection, sentence, clause, phrase, or word thereof, regardless of the fact that any one or more sections, subsections, clauses, phrases, or word might subsequently be declared invalid or unconstitutional or preempted by subsequent legislation.

Section 4. Effective Date. This Ordinance shall take effect thirty days after its adoption pursuant to California Government Code section 36937.

Section 5. Certification; Publication. The City Clerk shall certify to the passage and adoption of this Ordinance and shall cause the same to be published or posted according to law.

INTRODUCED, at a regular meeting of the City Council of the City of McFarland, California on

7/25/2024, by the following vote:

PASSED AND ADOPTED at a regular meeting of the City Council of the City of McFarland on 8/8/2024 by the following vote:

	Aye	Nae	Abstain	Absent
Saul Ayon				
Ricardo Cano				
Amador Ayon				
Anita Gonzalez				
María T. Pérez				

Saul Ayon, Mayor

I hereby certify that the foregoing Ordinance was duly and regularly adopted by the City Council of the City of McFarland by a regular meeting thereof held on August 8, 2024.

ATTEST:

Paul M. Saldana, Interim City Clerk



City of McFarland

City Council Meeting

STAFF REPORT

Agenda Item No. 7.
Section: CONSENT AGENDA
Meeting Date: August 8, 2024

TO: Honorable Mayor and Council Members

FROM: Diego Viramontes, City Manager
Brian Knox, Chief of Police

SUBJECT: APPROVAL OF TRAVEL AND TRAINING EXPENSES EXCEEDING \$500.00 PER TRIP FOR THE K-9 POLICE OFFICER TO ATTEND THE K-9 POLICE AND MILITARY WORKING DOG CONFERENCE ON SEPTEMBER 10-12, 2024, IN NASHVILLE, TENNESSEE AND FOR THE CHIEF OF POLICE TO ATTEND THE KERN CHIEF'S CONFERENCE ON SEPTEMBER 3, 2024, IN PISMO, CALIFORNIA.

SUMMARY:

The McFarland Police Department has staff scheduled for training classes and conferences during the month of September. The K-9 Police and Military Working Dog Conference is being held on September 10th through the 12th in Nashville, Tennessee. Canine training conferences are important for canine handlers to attend. They attract national and international canine trainers and handlers. Law enforcement canine training is always evolving and in constant change. Having a well-trained canine team decreases liability to a police agency and municipality. The updated canine training at these conferences stays current with the latest tactics, techniques and procedures of the law enforcement canine community.

Networking at training conferences is crucial in professional settings. It allows our canine unit to expand their connections, build relationships, and create opportunities for collaboration and growth. By connecting with people from diverse backgrounds and expertise, our canine unit can gain valuable insights, advice, and support. Networking is a valuable tool for success in today's interconnected world. This conference will give our canine team an opportunity to expand their networking circle. The cost of the conference, per diem and hotel, is \$2,280.95.

The Kern Chief's conference will be held September 3rd through September 6th in Pismo, California. The cost of the Kern Chief's conference and per diem is paid through the Kern Chief's Association dues, which are included in the McFarland Police Department budget. The cost of hotel is \$805.52, which has been accounted for in the McFarland Police Department's annual budget.

FINANCIAL IMPACT:

The total cost for both trainings is \$3,086.47. These trainings are budgeted in the McFarland Police Department 2024/2025 budget. As such, no budget adjustment is necessary at this time.

RECOMMENDATION:

Staff recommends approval of travel and training expenses exceeding \$500.00 per trip for the K9 Officer conference and Kern Chief's conference.

ATTACHMENTS:

1. Attendee2024_K9C
2. Kern Chiefs

13TH ANNUAL **K9COP** MAGAZINE POLICE & MILITARY WORKING DOG CONFERENCE NASHVILLE, TN SEP. 10,11,12 -2024



It's no surprise that Nashville is in the spotlight as the **TOP DESTINATION** for 2024

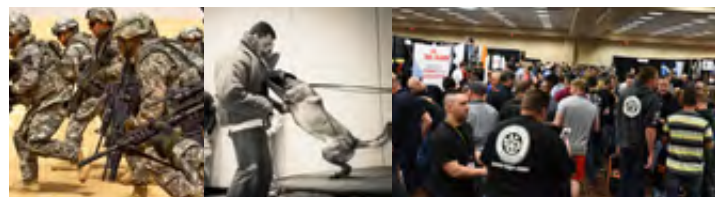
Our Host Hotel Sonesta Nashville Airport caters to guests looking for convenience and stress-free travel. Located minutes away from top attractions like the Grand Ole Opry, Country Music Hall of Fame and Nissan Stadium, this hotel reflects the unique charm of Music City. This Nashville hotel near the airport provides comfort, convenience and easy access to all that Music City has to offer.

ATTENDEE REGISTRATION only \$295 per person!

- Attendees receive a certificate for 16 hours Continuing Law Enforcement K-9 Education
- Each attendee receives a free conference t-shirt and SWAG bag with their registration.
- 35 World Class Instructors – Train with World-Renowned Instructors from around the globe.
- Create Your Own Class Schedule – Expanded course offerings again this year to provide you with a wide variety from which to choose.
- 45 Top Notch Vendors – Vendor Show featuring companies displaying equipment, products and services related to the police, military, K-9 and tactical industries.
- Hotel is K-9 friendly; dogs are welcome but not required.



Our conference & vendor show is open to all K-9 trainers, handlers, Law Enforcement, & Military personnel



13TH ANNUAL **K-9COP** MAGAZINE POLICE & MILITARY WORKING DOG CONFERENCE NASHVILLE, TN SEP. 10,11,12 -2024

ATTENDEE CONTRACT:

Agency/Department (if applicable): _____

Contact Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ Ext: _____ Fax: _____

Email: _____

Referral name or code (not required): _____

Attendee Name	Attendee Email (required for updates)	T-Shirt Size (S-4XL)	Amount
			\$295
Total			

Method of Payment:

☐ Credit Card

☐ Check

Credit Card #: _____ Exp. Date: _____ Security Code: _____

Billing Address (if different from above): _____

Cancellation/Refund – 100% refund less a non-refundable processing fee of \$25 prior to 60 days; 50% refund less a non-refundable processing fee of \$25 between 59 days and 30 days; no refunds 29 days prior to the event.

Substitutions – Substitutions are permitted within the same company, agency or department without penalty. Substitution requests may be submitted up to one (1) week in advance of the event. A full registration form for the substitute attendee must be completed in order to process.

Make checks payable to K-9 Cop Magazine

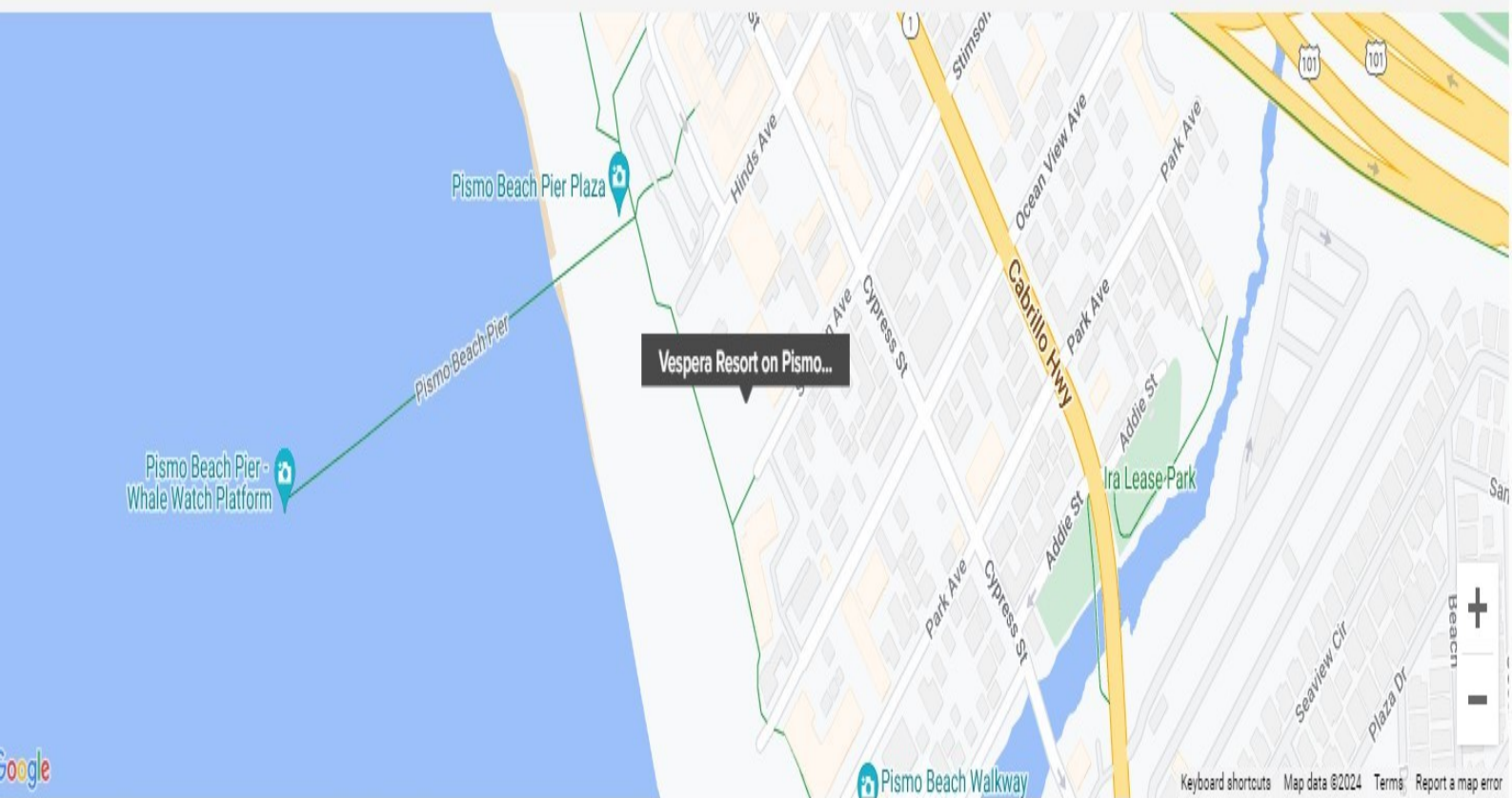
Call Sonesta: (800) 766-3782 using group code: K-9 Conference

Name: _____ Title: _____

Signature: _____ Date: _____



Kern County Chiefs



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Meeting event space

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City of McFarland

City Council Meeting

STAFF REPORT

Agenda Item No. 8.
Section: CONSENT AGENDA
Meeting Date: August 8, 2024

TO: Honorable Mayor and Council Members

FROM: Yerlys Hernandez , Public Works Director
Diego Viramontes, City Manager

SUBJECT: Receive and File Sewer Collection Master Plan

SUMMARY:

The City of McFarland owns and operates gravity sewer pipelines, sewer lift stations, sewer force mains and a wastewater treatment plant. With the Projected Growth, Land Annexations, and Current and Future Developments, The City of McFarland saw the need to analyze the condition and capacity of our current Sewer Infrastructure.

In May of 2023, the City of McFarland authorized Cannon Corp Civil Engineers to create a Sewer Master Plan. The purpose of the Sewer Master Plan is to Identify system rehabilitation needs, identify capacity deficiencies, identify future capacity needs, develop feasible alternatives to correct deficiencies and meet future capacity, plan the necessary rehabilitation improvements, and future Capital improvement Projects.

The draft Sewer Master Plan is now available for public comment, a draft of which is attached. McFarland - Sewer Collection System Master Plan 2024 - Draft. Once the final plan is complete it will be brought back before Council for final adoption.

FINANCIAL IMPACT:

There is no financial impact.

RECOMMENDATION:

Receive and File Sewer Collection Master Plan

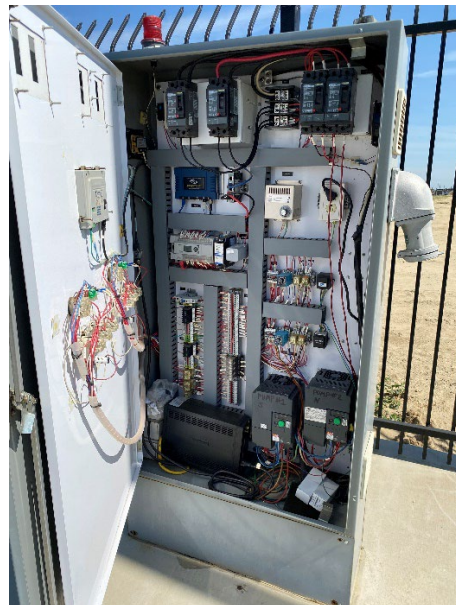
ATTACHMENTS:

1. McFarland - Sewer Collection System Master Plan 2024 - Draft

City of McFarland

Sewer Collection System Master Plan

June 2024 Draft



Prepared for:
City of McFarland
Public Works Department
401 Kern Avenue
McFarland, CA 93250

Prepared by:
Cannon Corp, San Luis Obispo

Table of Contents

EXECUTIVE SUMMARY	3
INTRODUCTION.....	3
STUDY AREA AND DESIGN SEWER FLOWS.....	3
HYDRAULIC MODEL AND CAPACITY EVALUATION.....	3
CONDITION ASSESSMENT	3
RECOMMENDED IMPROVEMENTS AND CAPITAL IMPROVEMENT PROGRAM	3
1. INTRODUCTION.....	4
1.1 BACKGROUND	4
1.2 PURPOSE, SCOPE & AUTHORIZATION	4
1.3 ACRONYMS, ABBREVIATIONS AND DEFINITIONS.....	5
2. STUDY AREA CHARACTERISTICS	6
2.1 LOCATION & STUDY AREA	6
2.2 TOPGRAPHY & CLIMATE.....	10
2.3 LAND USE & PLANNING PERIOD	10
2.4 POPULATION	12
3. PLANNING AREA DESIGN CRITERIA	15
3.1 GRAVITY SEWER LINES.....	15
3.1.1 Manning Coefficient (n).....	15
3.1.2 Flow Depth Criteria (d/D)	15
3.1.2.1 Flow Depth of Existing Sewers	15
3.1.2.2 Flow Depth of New Sewers.....	15
3.1.3 Design Velocities and Minimum Slopes.....	16
3.1.4 Change in Pipe Size.....	17
3.2 LIFT STATIONS AND FORCE MAINS	17
4. SEWER FLOWS	19
4.1 FLOW MONITORING PROGRAM.....	19
4.1.1 Flow Monitoring Location Selection	19
4.1.2 Flow Monitoring Implementation	22
4.1.3 Flow Monitoring Sample Data	22
4.1.4 Flow Monitoring Results.....	23
4.2 WASTEWATER FLOW COMPONENTS.....	23
4.3 EXISTING AND FUTURE SEWER FLOWS	24
4.3.1 Wastewater Flow Coefficients.....	24
4.3.2 Existing Area Served and Future Development Average Dry Weather Flows.....	24
4.4 DESIGN SEWER FLOW.....	26
5. COLLECTION SYSTEM HYDRAULIC MODEL	30
5.1 MODELED SEWER COLLECTION SYSTEM	30
5.1.1 Sewer Basins and Major Interceptors	30
5.1.2 Lift Stations.....	31
5.2 SEWER SYSTEM HYDRAULIC MODEL	31
5.2.1 Selected Hydraulic Model	33
5.2.2 Elements of the Hydraulic Model	33
5.2.3 Quantifying Wastewater Flow	34
5.2.4 Sewer Tributary Areas (Existing and Future).....	35
5.2.5 Hydraulic Model Construction	35
5.3 HYDRAULIC MODEL CALIBRATION	36

5.3.1	Dry Weather Flow Calibration	36
6.	COLLECTION SYSTEM CONDITION ASSESSMENT	38
6.1	PERKINS CCTV VIDEO INSPECTION	38
6.1.1	Methodology	38
6.2	PERKINS, GARZOLI, TAYLOR, AND FIFTH MANHOLE INSPECTIONS	43
6.2.1	Methodology	43
6.2.2	Results of Manhole Inspections	43
6.3	EXISTING LIFT STATION INSPECTIONS	46
6.3.1	Methodology	46
6.3.2	Results of Lift Station Inspections	46
7.	CAPACITY EVALUATION AND RECOMMENDED IMPROVEMENTS	49
7.1	COLLECTION SYSTEM CAPACITY ANALYSIS RESULTS	49
7.1.1	Existing System	49
7.1.2	Future System	50
7.2	RECOMMENDED IMPROVEMENTS	55
7.2.1	Project Categories	55
7.2.2	Maintenance Related Improvements	55
7.2.3	Existing Capacity Related Improvements	56
7.2.4	Future Development/Capacity Related Improvements	56
7.3	DESIGN PARAMETERS FOR TAYLOR AVENUE HIGHWAY 99 UNDERCROSSING	58
8.	CAPITAL IMPROVEMENT PLAN	59
8.1	PROJECT COSTS	59
8.2	CAPITAL IMPROVEMENT IMPLEMENTATION	59
8.3	EXISTING VERSUS FUTURE USERS COST SHARE	62
8.3.1	Existing Users Cost	62
8.3.2	Future Users Cost	62
8.3.3	Shared Cost	62
	REFERENCES	63
	TECHNICAL APPENDICES	64
	APPENDIX A - GOLD COAST ENVIRONMENTAL SEWER FLOW REPORTS	65
	APPENDIX B - DSI SEWER CCTV INSPECTION REPORT (ABBREVIATED)	66
	APPENDIX C - PRELIMINARY PROJECT COST ESTIMATES	67

EXECUTIVE SUMMARY

INTRODUCTION

[Complete after receipt of City comments on Draft Report.]

STUDY AREA AND DESIGN SEWER FLOWS

[Complete after receipt of City comments on Draft Report.]

HYDRAULIC MODEL AND CAPACITY EVALUATION

[Complete after receipt of City comments on Draft Report.]

CONDITION ASSESSMENT

[Complete after receipt of City comments on Draft Report.]

RECOMMENDED IMPROVEMENTS AND CAPITAL IMPROVEMENT PROGRAM

[Complete after receipt of City comments on Draft Report.]

1. INTRODUCTION

This chapter presents brief background information, the purpose of the Sewer Collection System Master Plan, and the scope of work to be covered in preparing the Sewer Collection System Master Plan.

1.1 BACKGROUND

The City of McFarland (City) owns and operates gravity sewer pipelines, sewer lift stations, sewer force mains, and a Wastewater Treatment Plant with a permitted capacity of 1.55 million gallons per day (MGD) within its service area. The City collects wastewater from residential, commercial, and institutional customers.

In 2013, the City completed the “City of McFarland Wastewater Treatment Master Plan” which evaluated the future wastewater treatment capacity needs of the City, and provided improvement recommendations to meet the City’s future needs. Some of the recommended Wastewater Treatment Plant improvements have been completed, and construction of further improvements is ongoing. The last sewer collection system master plan prepared by the City of McFarland was in 2006. Since that time, significant growth and development have occurred in the City. In addition, large areas to the southeast and southwest of the City limits have recently been annexed into the City. Development is expected to begin in these areas in the near future. Therefore, preparation of an updated sewer collection system master plan is needed at this time.

1.2 PURPOSE, SCOPE & AUTHORIZATION

The purpose of the Sewer Collection System Master Plan is to address the following needs:

- identify system rehabilitation needs,
- identify existing capacity deficiencies,
- identify future capacity needs,
- develop feasible alternatives to correct the deficiencies and meet future capacity needs,
- plan the necessary rehabilitation improvements, and
- plan the capacity improvements and infrastructure to serve future development.

The City approved scope of work with Cannon Corporation (Cannon) for the Sewer Collection System Master Plan (Master Plan) includes the following tasks:

- Field survey to support hydraulic model development.
- Flow monitoring at critical sewer manholes, and data analysis.
- Calculate design flows.
- Sewer Collection System hydraulic model development.
- Existing and future sewer collection system capacity analysis.
- CCTV video of key sewer lines.
- Field inspection and condition assessment of key manholes and lift stations.
- Development of recommendations and Capital Improvement Plan (CIP).
- Master Plan report preparation.

Cannon wishes to acknowledge and thank Yerlys Hernandez Public Works Director, Robert Cisneros, Wastewater Treatment Plant Supervisor, and Jose Medina, Wastewater Operator for their cooperation and contribution toward producing the Master Plan.

1.3 ACRONYMS, ABBREVIATIONS AND DEFINITIONS

Acronyms and abbreviations are used in this report to conserve space and to improve readability. The definitions of the various acronyms and abbreviations used in the report are provided in Table 1-1 below to assist the reader in understanding the information presented in the report.

Table 1-1 Definitions of Acronyms and Abbreviations

Acronym or Abbreviation	Definition
ADWF	Average Dry Weather Flow
Cannon	Cannon Corporation
CCTV	Closed-Circuit Television
CEQA	California Environmental Quality Act
CIP	Capital Improvement Plan
City	City of McFarland
d/D	Flow Depth of Pipe Diameter Ratio
DOF	California Department of Finance
DWF	Dry Weather Flow
ENR CCI	Engineering News Record Construction Cost Index
EPA	Environmental Protection Agency
fps	Feet per Second
GIS	Geographic Information System
gpd	Gallons per Day
gpd/ac	Gallons per Day per Acre
gpm	Gallons per Minute
GWDRs	General Waste Discharge Requirements Order Number No. 2022-0103-DWQ
GWI	Groundwater Infiltration
HGL	Hydraulic Grade Line
I/I	Infiltration/Inflow
Master Plan	Sewer Collection System Master Plan
MGD	Million Gallons per Day
msl	Mean Sea Level
n	Manning Friction Coefficient
PWWF	Peak Wet Weather Flow
ROW	Right-of-Way
SSMH	Sanitary Sewer Manhole
SSO	Sanitary Sewer Overflow
SWRCB	State Water Resources Control Board
TDH	Total Dynamic Head
UPRR	Union Pacific Railroad
WWF	Wet Weather Flow
WWTP	Wastewater Treatment Plant

2. STUDY AREA CHARACTERISTICS

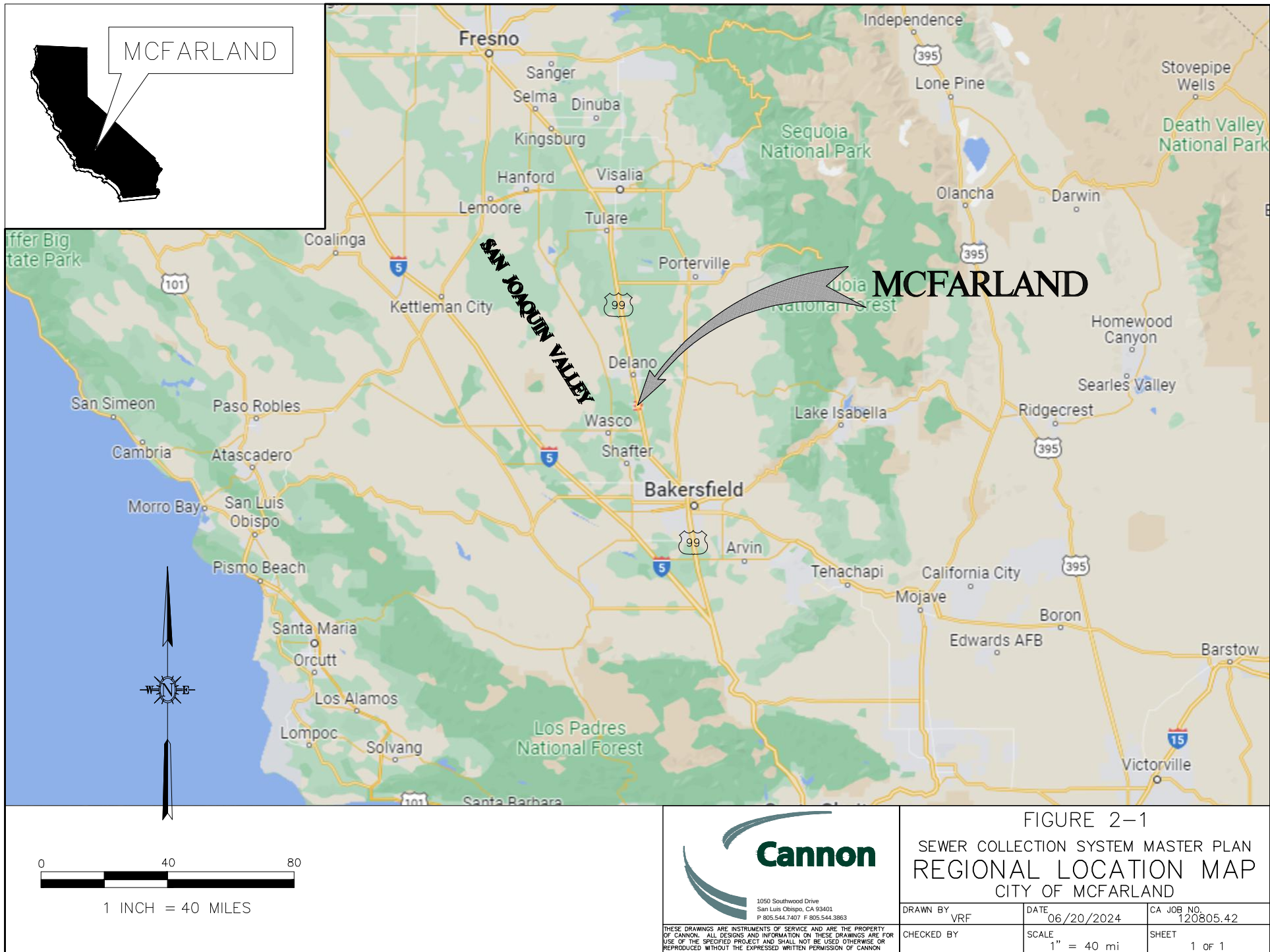
This chapter presents a description of the study area, discusses the land use classifications, and summarizes the historical and projected population trends.

2.1 LOCATION & STUDY AREA

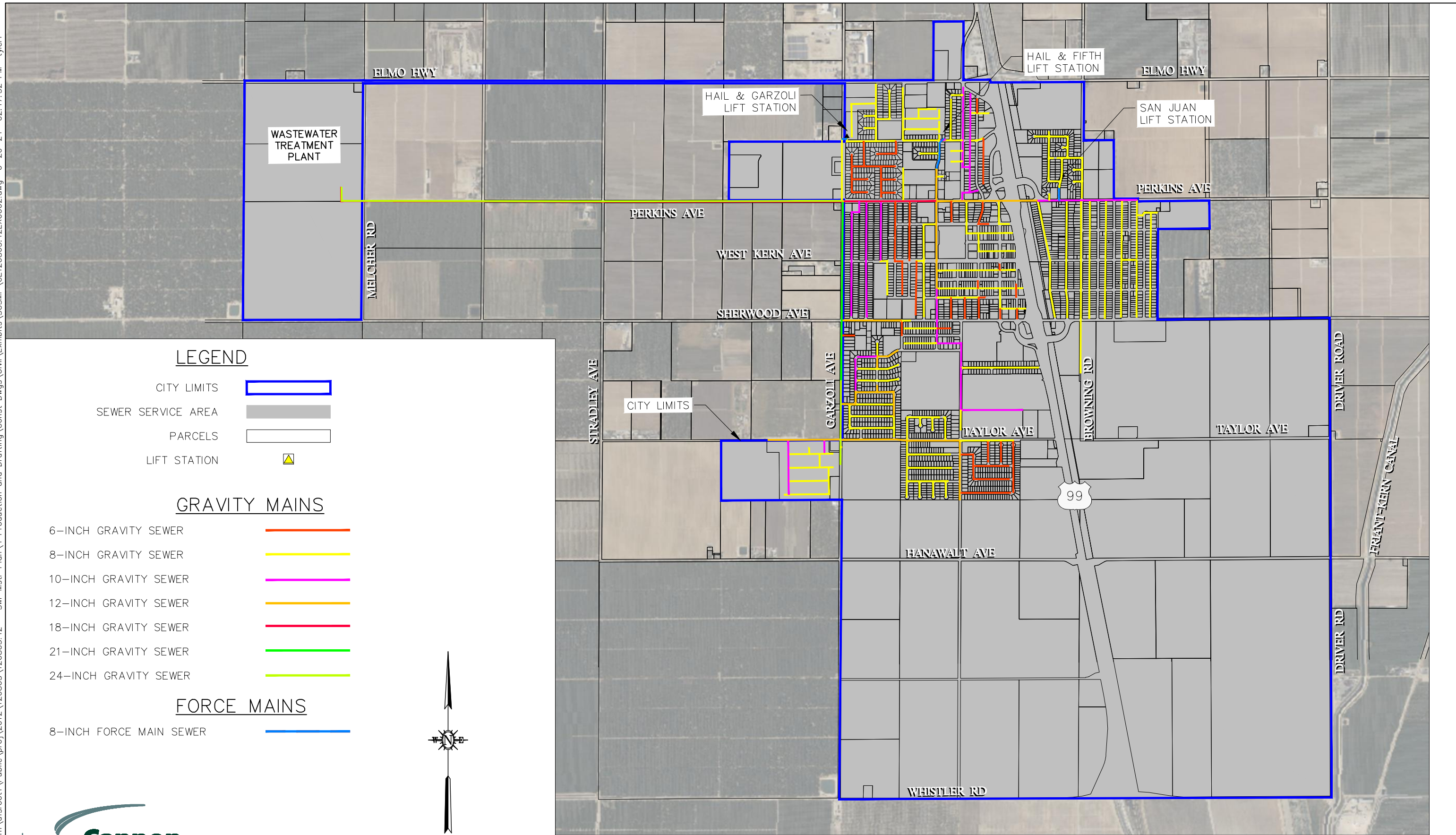
The City of McFarland is located in the southern San Joaquin Valley, approximately 10 miles west of the foothills of the Sierra Nevada Mountains and 40 miles west of the coastal mountains. The City straddles State Route (Hwy) 99, and is located in the north-central portion of Kern County, about 26 miles north of Bakersfield. The Regional Location Map is shown in Figure 2-1.

The City operates and maintains approximately 24 miles of sewer lines ranging from 6-inches to 24-inches in diameter, and three sewer lift stations with associated force mains. All wastewater generated within the City is ultimately conveyed through 18" and 24" trunk sewer lines in Perkins Avenue to the City's Wastewater Treatment Plant (WWTP) for treatment. Figure 2-2 illustrates the City's Current Sewer Service Area.

The City recently annexed 2,180 acres within its sphere of influence, southeast and southwest of the prior City Limits. The City expects significant new development to begin in the near future in this recently annexed area. Therefore, the study area boundary for this Sewer Collection System Master Plan (Master Plan) and the current City limits are coterminous and will be used interchangeably throughout this report. The Study Area (including study area boundary) is shown in Figure 2-3.



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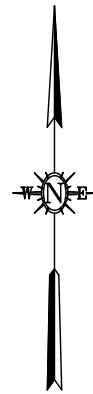
- CITY LIMITS 
- SEWER SERVICE AREA 
- PARCELS 
- LIFT STATION 

GRAVITY MAINS

- 6-INCH GRAVITY SEWER 
- 8-INCH GRAVITY SEWER 
- 10-INCH GRAVITY SEWER 
- 12-INCH GRAVITY SEWER 
- 18-INCH GRAVITY SEWER 
- 21-INCH GRAVITY SEWER 
- 24-INCH GRAVITY SEWER 

FORCE MAINS

- 8-INCH FORCE MAIN SEWER 

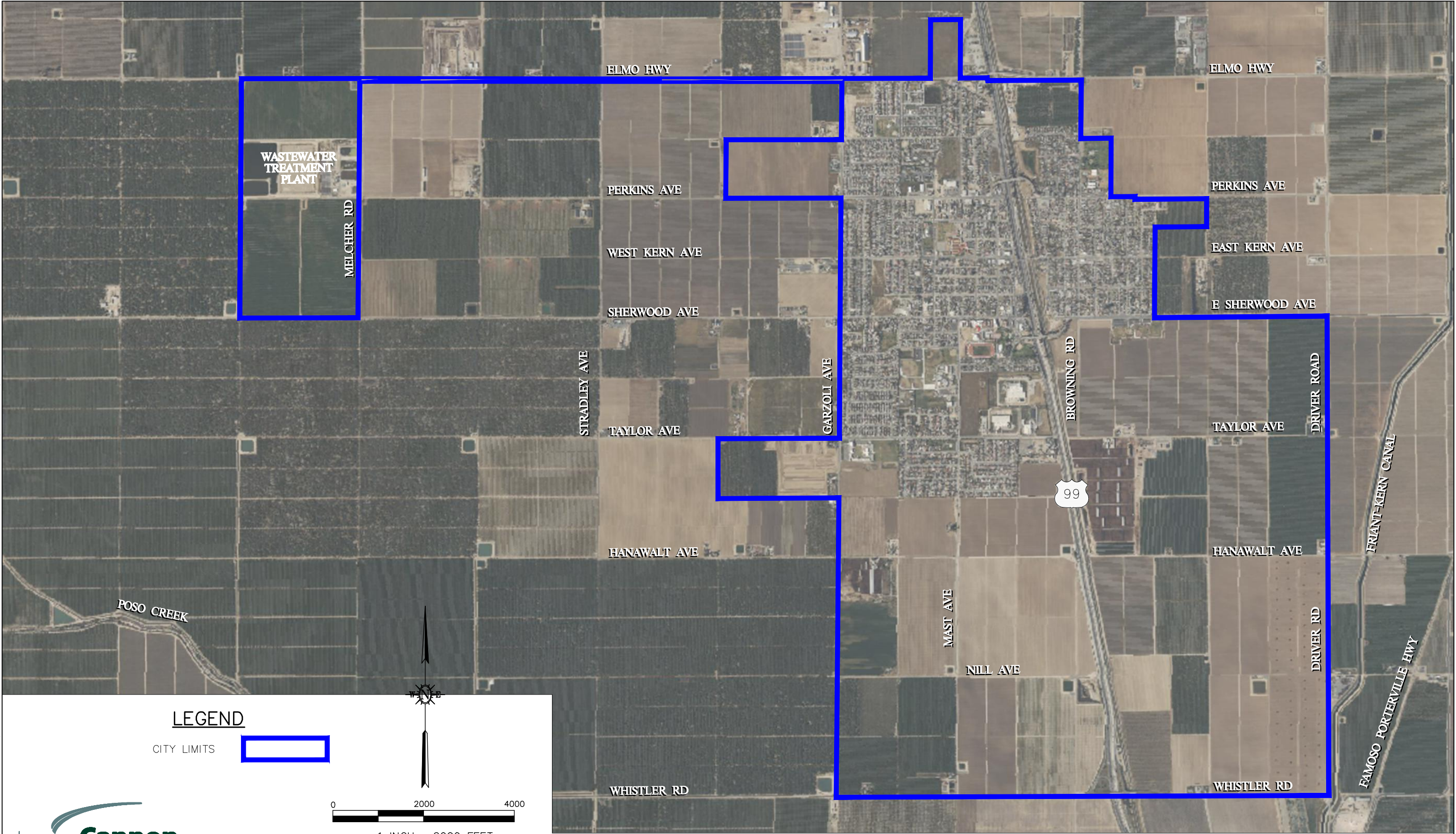


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1 INCH = 2000 FEET



FIGURE 2-2
SEWER COLLECTION SYSTEM MASTER PLAN
CURRENT SEWER SERVICE AREA
CITY OF MCFARLAND

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LEGEND

CITY LIMITS



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1 INCH = 2000 FEET



FIGURE 2-3
SEWER COLLECTION SYSTEM MASTER PLAN
STUDY AREA
CITY OF MCFARLAND

2.2 TOPGRAPHY & CLIMATE

The topography across the City and the region is generally very flat and slopes to the northwest at a grade of less than 0.5 percent. The elevation in the middle of town is approximately 360 feet above sea level.

The regional climate can be characterized by relatively cold winters, and hot, dry summers. Winter months are cold with occasional inversion temperatures resulting in “Tule” fog in late winter. Winter temperatures occasionally drop below 32 degrees Fahrenheit, with the frost period extending from late November through February. Summers are hot, dry, and nearly cloudless. Summer temperatures range from daytime highs exceeding 100 degree Fahrenheit to nighttime lows in the range of 50 to 60 degrees Fahrenheit.

Precipitation in the area averages between 5 to 7 inches per year. Most of the rain falls between November and April. Above average rainfall occurred during the period of November 2022 to April 2023 with the rainfall total for the City around 10.8 inches. The prevailing wind is from the Northwest. The wind generally increases in the evening as a result of thermal effects. The average growing season typically extends from March through November.

2.3 LAND USE & PLANNING PERIOD

Land use information and area (acres) are integral components in forecasting future wastewater generation within a city. The type and acreage of land uses in an area will affect the volume and character of the wastewater generated by that area. Adequately estimating the generation of wastewater flows from various land use types is important in planning for and sizing effective sewer system facilities.

The City of McFarland provides sewer collection service to multiple land use types and zoning designations within the study area. Land use types and zoning designations within a city are defined by the city’s General Plan. The land use information used in the Master Plan is based on the City’s current 2040 General Plan (adopted in 2021) and zoning designations, as illustrated in the current City Zoning Map presented as Figure 2-4 FIGURE 2-4 CITY ZONING MAP below. Table 2-1 provides the acreage totals by zoning designations within the City Limits, and a breakdown between developed and undeveloped lands.

The City’s zoning designations set the foundation for the land use assumptions in this Master Plan. Should future planning conditions change significantly from the assumptions in the Master Plan (i.e., accelerated growth, more intense development, etc.), update of the Master Plan is recommended.

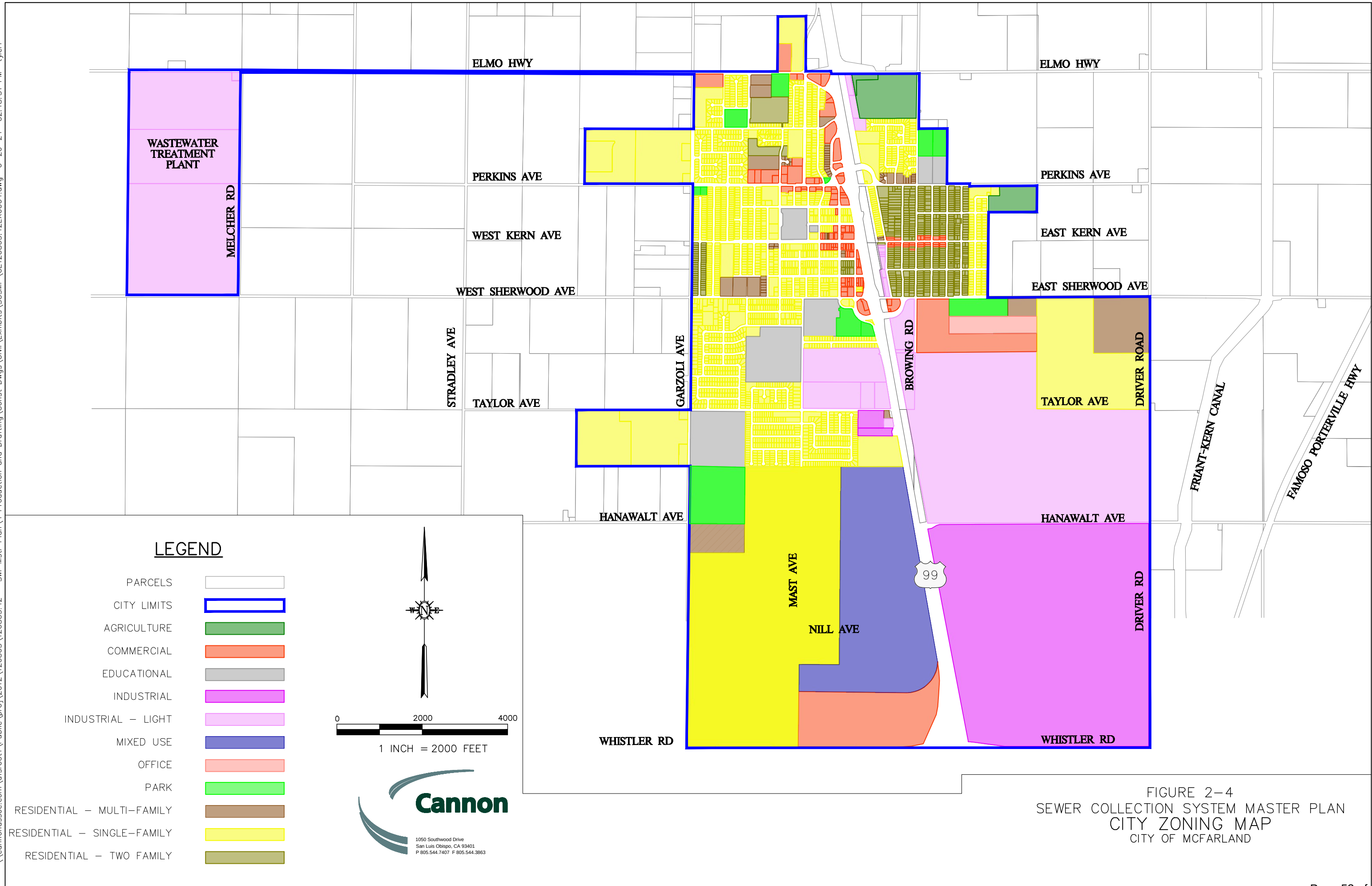


Table 2-1 Zoning Designations & Area

Zoning Designation	Area within the Current City Limits ¹		
	Developed (acres)	Undeveloped (acres)	Total (acres)
Residential - Single Family	411.58	728.32	1,139.89
Residential - Two Family	110.05	0.00	110.05
Residential - Multi-Family	32.65	65.28	97.93
Mixed Use	0	246.48	246.48
Commercial	60.31	137.11	197.43
Office	0	19.08	19.08
Industrial - Light	385.10	441.13	826.23
Industrial	0.00	569.68	569.68
Educational	91.91	19.19	111.10
Park	79.43	3.95	83.38
Agricultural	49.39	0.00	49.39
Total	1,220.41	2,230.21	3,450.62
<i>Notes:</i> 1. Area totals exclude roads, highways, waterways, etc.			

When modeling sewer systems, wastewater flows are often split into residential and commercial/industrial “categories” based on diurnal flow patterns and waste characteristics. Within the City of McFarland, the largest zoning category is commercial/industrial (commercial, office, light industrial, and industrial) which accounts for 1,612 acres, or approximately 47 percent of the total City area (excluding streets, highways, waterways, etc.). The residential zoning category (single-family, two-family, and multi-family) makes up 1,348 acres, or approximately 39 percent of the total City area. The other zoning designations including mixed use, educational, parks, and agricultural account for the remaining 15 percent of the City area.

The Planning Period of the City of McFarland Sewer Collection System Master Plan is through the year 2045. The Master Plan study area is intended to include the existing City Limits, and incorporate development that could occur through the Planning Period. The City is not anticipating annexing any additional land areas beyond the current City limits within the Planning Period of the Master Plan. Therefore, the area covered by the Master Plan does not extend beyond the current City Limits. As seen in Table 2-1, there are roughly 2,230 acres of developable land within the current City Limits. For projecting future wastewater flows, the Master Plan assumes that the 2,230 acres of undeveloped land within in the City Limits will be developed by 2045.

2.4 POPULATION

Population data and growth projections are essential to determining the present per capita wastewater flows, and to estimate future wastewater flows. As indicated in Table 2-2, the City had an approximate population of 12,707 in 2010. The Kern County Council of Governments (COG) forecasts the City of McFarland’s population to increase to approximately 16,142 by 2025, and 19,300 by 2040. Based on the COG forecasts, the City’s estimated population in 2024 is

15,932. This indicates an approximate 21 percent population growth between 2024 and 2040. For the purposes of the Master Plan, the City's projected growth is assumed to occur within the recently annexed southeast and southwest areas. Table 2-2 and Figure 2- summarize the City's historical and projected population from the year 1980 through the year 2040.

Table 2-2 City of McFarland Historical and Projected Population

Year	City Population ¹	Annual Percent Growth
1980	5,151	3.3%
1985	6,007	3.3%
1990	7,005	3.3%
1995	8,208	3.4%
2000	9,615	3.4%
2005	11,055	3.0%
2010	12,707	3.0%
2015	14,037	2.1%
2020	15,090	1.5%
2025	16,142	1.4%
2030	17,195	1.3%
2035	18,247	1.2%
2040	19,300	1.2%

Notes:
1. Population projections provided by the Kern County Council of Governments 2014 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS)

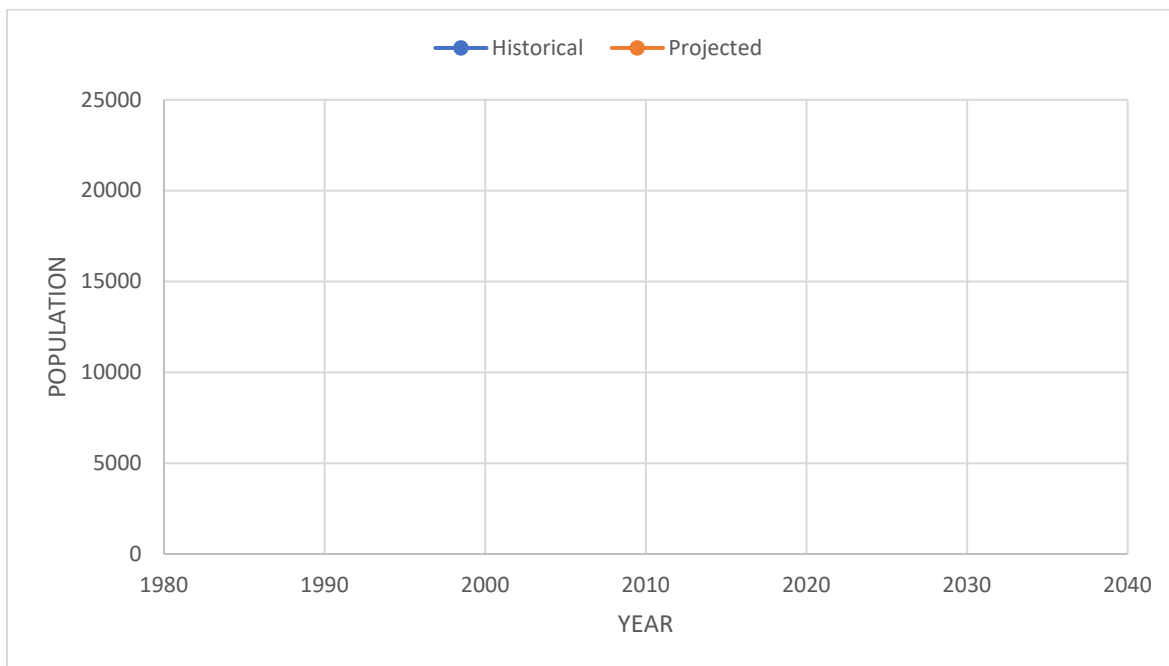


Figure 2-5: City of McFarland Historical and Projected Population

3. PLANNING AREA DESIGN CRITERIA

The capacity of the City of McFarland's sewer collection system was evaluated based on the planning area design criteria defined in this chapter. The design criteria are primarily based on the City of McFarland's Improvement Standards. The City's Improvement Standards stipulate general policies within the City, and outline sewer system design criteria. Some of the criteria are discussed in this chapter. In the absence of City sewer design standards, Kern County Engineering Development Standards, and other design criteria developed by Cannon based on engineering judgement and past experience are used. This chapter addresses the collection system capacity, gravity sewer line slopes, maximum depth of flow within sewer lines, and average wastewater flow coefficients.

3.1 GRAVITY SEWER LINES

Gravity sewer pipe capacities are dependent upon the following factors: pipe diameter, pipe roughness, pipe slope, maximum allowable depth of flow, and minimum/maximum velocities.

3.1.1 Manning Coefficient (n)

The Manning Roughness Coefficient (n) is a friction coefficient and varies with respect to pipe material, size of pipe, depth of flow, smoothness of pipe and joints, and extent of root intrusion. For sewer pipes, the Manning Roughness Coefficient typically ranges between 0.011 and 0.017, with 0.013 being a representative value used for sewer system master planning.

3.1.2 Flow Depth Criteria (d/D)

The primary criterion used to identify capacity deficient trunk sewers or to size new improvements is the maximum flow depth to pipe diameter ratio (d/D). In this case, the d/D ratio value is defined as the depth of flow (d) in a pipe during peak flow conditions, divided by the pipe's diameter (D). The City's Standard Details and Specifications do not specifically define the acceptable d/D values for various pipe diameters.

3.1.2.1 Flow Depth of Existing Sewers

Maximum flow depth criteria of existing sanitary sewers are established based on a number of factors, including the acceptable risk tolerance of the utility, funding availability, local standards and codes, and other factors. Using a conservative d/D ratio when evaluating existing sewers may lead to unnecessary replacement of existing pipelines. Conversely, lenient depth criteria could increase the risk of sanitary sewer overflows (SSOs). Ultimately, the maximum allowable flow depth criteria should be established to be as cost effective as possible while at the same time reducing the risk of SSOs to the extent possible.

3.1.2.2 Flow Depth of New Sewers

When designing new sewers, it is customary practice to adopt variable flow depth criteria for different pipe sizes. Design d/D ratios typically range from 0.5 to 0.92, with the lower values used for smaller pipes, which may experience flow peaks greater than design flow or may experience blockages from debris, paper, or rags.

Based on industry standards and Cannon's experience, the following d/D criteria are established. Sewers 12-inches in diameter and smaller shall be designed to flow with an approximate liquid depth to pipe diameter ratio of 0.50. Sewers 15-inches in diameter and larger shall be designed to flow with an approximate liquid depth to pipe diameter ratio of 0.75. The maximum flow depth criteria are listed in Table 3-1 below.

**Table 3-1 Maximum Flow Depth Criteria (d/D)
for Existing and New Sewers**

Pipe Diameter	Maximum Allowable d/D Ratio
Less Than and Equal to 12" ($\leq 12''$)	0.50
Greater Than and Equal to 15" ($\geq 15''$)	0.75

3.1.3 Design Velocities and Minimum Slopes

In order to minimize the settlement of sewage solids, sewer velocities should be equal to or greater than 2 feet per second (fps), based on a roughness coefficient of 0.013. At this velocity, the sewer flow will typically provide self-cleaning of the pipe. Table 3-2 lists the recommended minimum slope for new sewer pipes and the corresponding maximum flow when the pipes are flowing at their maximum d/D ratio.

Table 3-2 Minimum Slope and Maximum Flow for New Sewer Pipe

Pipe Diameter (inches)	Minimum Slope ^{(1),(2)} (feet/feet)	Calculated Flow at Maximum d/D ^{(2),(3)}	
		d/D	Maximum Flow (MGD)
8	0.0050 ⁽⁴⁾	0.50	0.276
10	0.0025	0.50	0.353
12	0.0019	0.50	0.508
15	0.0011	0.75	1.276
18	0.0009	0.75	1.838
21	0.0007	0.75	2.501
24	0.0006	0.75	3.267
27	0.0005	0.75	4.135
30	0.0004	0.75	5.105
36	0.0003	0.75	7.351
42	0.0003	0.75	10.005
48	0.0002	0.75	13.068
Notes: 1. Recommended minimum slope for flows at a velocity greater than or equal to 2 fps. 2. Manning's $n = 0.013$. 3. Calculated flow is determined using the minimum slope and the maximum allowable d/D presented in Table 3.1. 4. The minimum slope for 8-inch sewer mains is listed at 0.5%, which is slightly greater than that required to maintain a minimum velocity of 2 fps with a d/D of 0.5.			

3.1.4 Change in Pipe Size

In accordance with the City's Standard Details and Specifications, when a smaller sewer joins a large one, the inlet crown shall be at least as high as the outlet crown.

3.2 LIFT STATIONS AND FORCE MAINS

Some key design parameters for sewer lift stations include the following:

- dry pit-wet well, or wet well only design,
- above grade or submersible motors,
- number of pumps and pump capacity,
- wet well storage capacity,
- number of pump starts per hour, and
- backup power supply such as an emergency generator

Industry standard practice is to require that sewer lift stations have two or more pumps, and sufficient capacity to pump the design flow with the largest pump out of service. This is referred to as “firm” capacity.

Force main pipe material and pipe diameter are two key design parameters. High density polyethylene (HDPE) pipe is a commonly preferred pipe material for sewer force mains due to its fused joints, and corrosion and abrasion resistance. Selecting the optimal force main pipe diameter is important in determining the resulting velocity based on design flows. Force main piping should be sized to provide a minimum velocity of 3 fps at the design flow of the lift station to maintain a self-cleaning velocity within the pipeline, and to limit the maximum velocity to no more than 8 fps to avoid excessive head loss within the pipeline.

4. SEWER FLOWS

This chapter summarizes the flow monitoring program, and presents the calculations of the design flows used in evaluation of the capacity of the existing and future sewer system.

4.1 FLOW MONITORING PROGRAM

4.1.1 Flow Monitoring Location Selection

In coordination with City staff, Cannon selected five (5) sewer manhole locations for the City of McFarland's flow monitoring program. The goal was to select key locations capable of providing a comprehensive assessment of the City's entire sewer collection system. Three of the flow monitoring locations were selected along Perkins Avenue, one of the City's primary east-west roads, which connects the principal areas of the City. Two trunk sewer lines are located in Perkins Avenue: an 18" VCP sewer line, and a 24" PVC sewer line. These trunk sewer lines collect and convey sewage from throughout the City's existing sewer service areas to the City's wastewater treatment plant (WWTP).

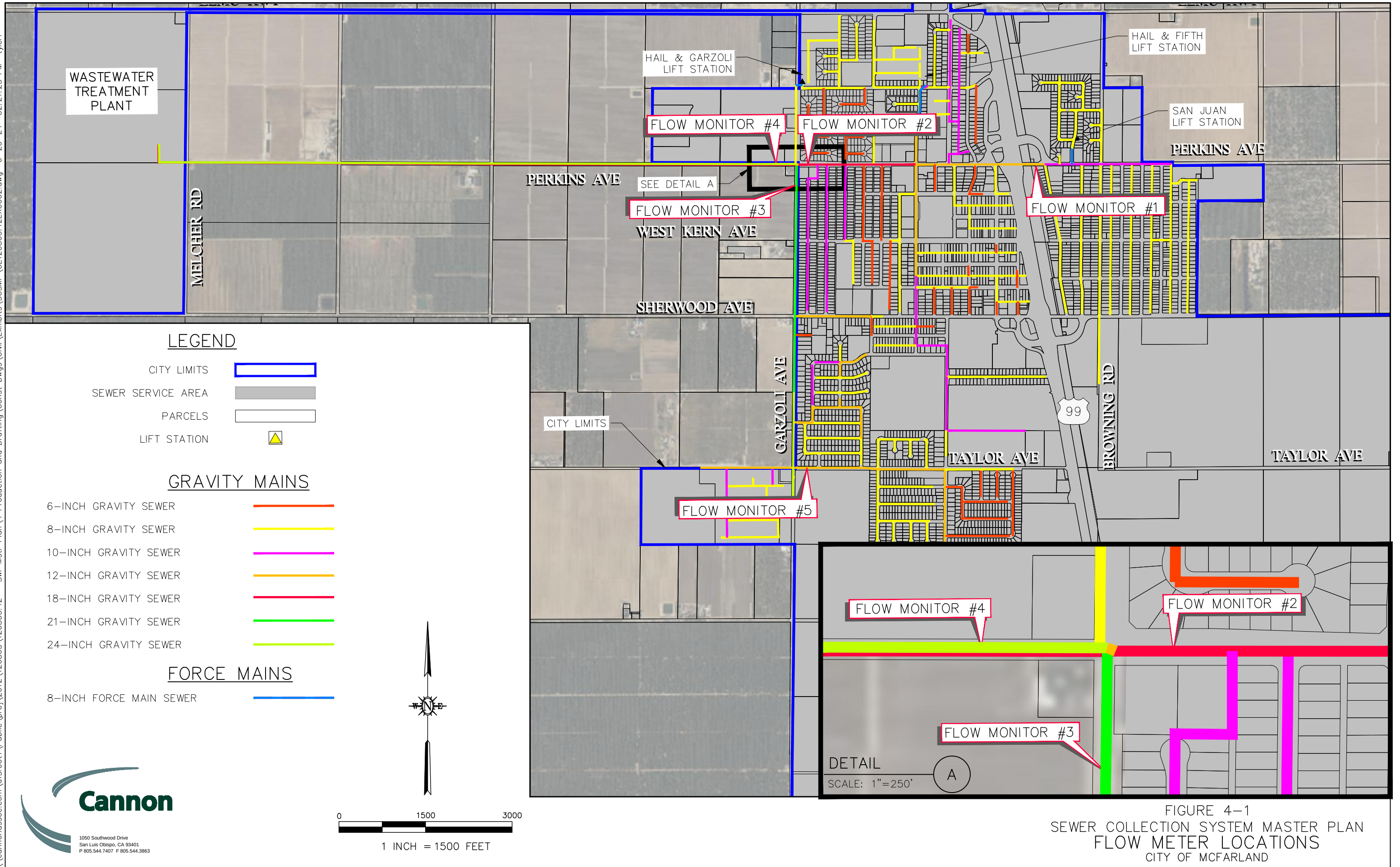
The first flow monitoring site was located along Perkins Avenue just east of Highway 99, near the intersection with Industrial Street. The second flow monitoring site was located along Perkins Avenue just east of the intersection with Garzoli Avenue. The third flow monitoring site was located along Garzoli Avenue a little south of the intersection of Perkins Avenue & Garzoli Avenue. The fourth flow monitoring site was located along Perkins Avenue a little west of the intersection of Perkins Avenue & Garzoli Avenue. The fifth and final flow monitoring location was located along Taylor Avenue just east of the intersection of Garzoli Avenue & Taylor Avenue. The intention of the third and fifth monitoring locations was to capture data for the area of the City south of Perkins Avenue and west of Highway 99.

The flow metering manhole locations and pipe diameters where the meters were installed are listed in Table 4-1 below. The Flow Meter Locations are illustrated in Figure 4-1, and Figure 4-2 provides a Schematic of the Flow Monitoring Locations.

Table 4-1 Flow Metering Manhole Locations and Pipeline Diameters

Site No.	Manhole No.	Location	Diameter (inches)
1	7054	Near the intersection of E Perkins Avenue & Industrial Street on the east side of Highway 99 (Perkins Trunk Line)	12
2	7037	Along W Perkins Avenue just east of the intersection with Garzoli Avenue (Perkins Trunk Line)	18
3	7066	Along Garzoli Avenue a little south of the intersection with W Perkins Avenue (Garzoli Trunk Line)	21
4	7033	Along W Perkins Avenue a little west of the intersection with Garzoli Avenue (Garzoli Trunk Line)	24
5	7084	Along Taylor Avenue just east of the intersection with Garzoli Avenue (Garzoli Trunk Line)	12

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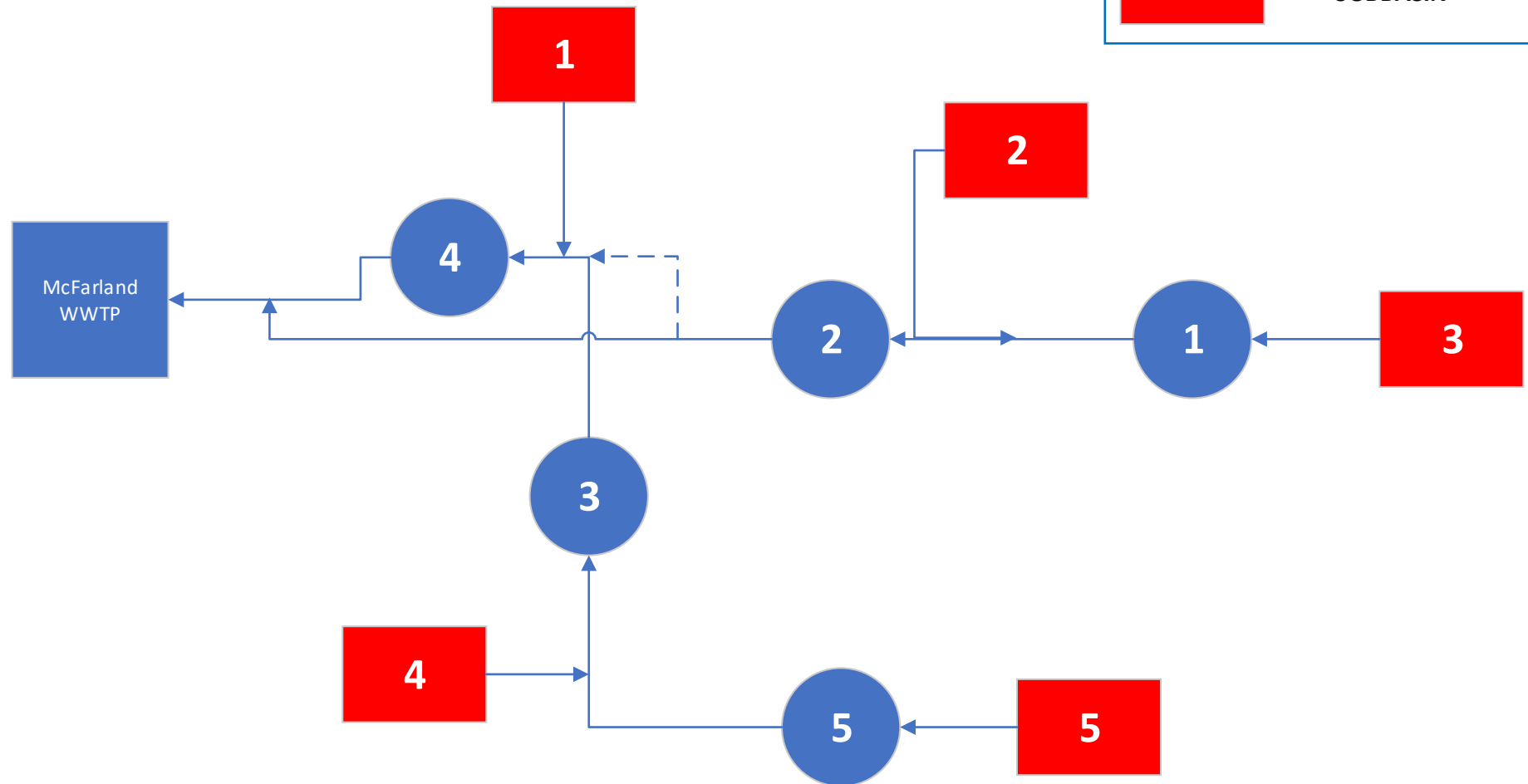
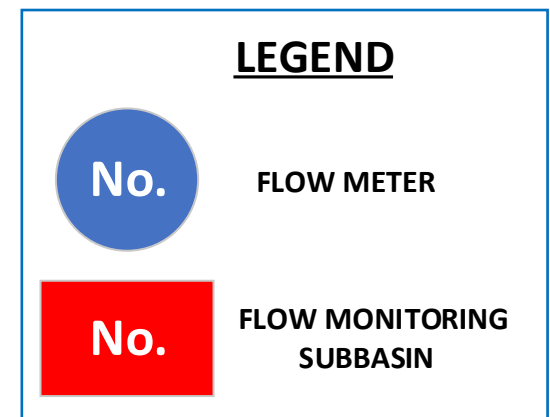


FIGURE 4-2
SEWER COLLECTION SYSTEM MASTER PLAN
FLOW MONITORING LOCATIONS SCHEMATIC
City of McFarland Page 63 of 402

4.1.2 Flow Monitoring Implementation

The City of McFarland contracted with Gold Coast Environmental to implement a flow monitoring program and conduct temporary flow monitoring at (5) five sewer manholes/metering sites. The flow monitoring was conducted from July 26, 2023, to August 09, 2023. The flow meter at sanitary sewer manhole (SSMH) 7033, along Perkins Avenue, west of Garzoli Avenue, initially provided inaccurate data, so this location was re-monitored from November 22, 2023, to December 05, 2023. As part of this Sewer Collection System Master Plan, the City requested that Cannon summarize in the Mast Plan the data collected by Gold Coast Environmental (GCE). As requested, the data collected by GCE is summarized below.

4.1.3 Flow Monitoring Sample Data

Sample flow metering data for a 24-hour period at Site 2 (SSMH 7037) is presented in Figure 4-3 below. Sample flow metering data for a 24-hour period at Site 4 (SSMH 7033) is presented in Figure 4-4 below. Complete copies of the Gold Coast Environmental Sewer Flow Reports including all data collected by GCE are included in Appendix A.

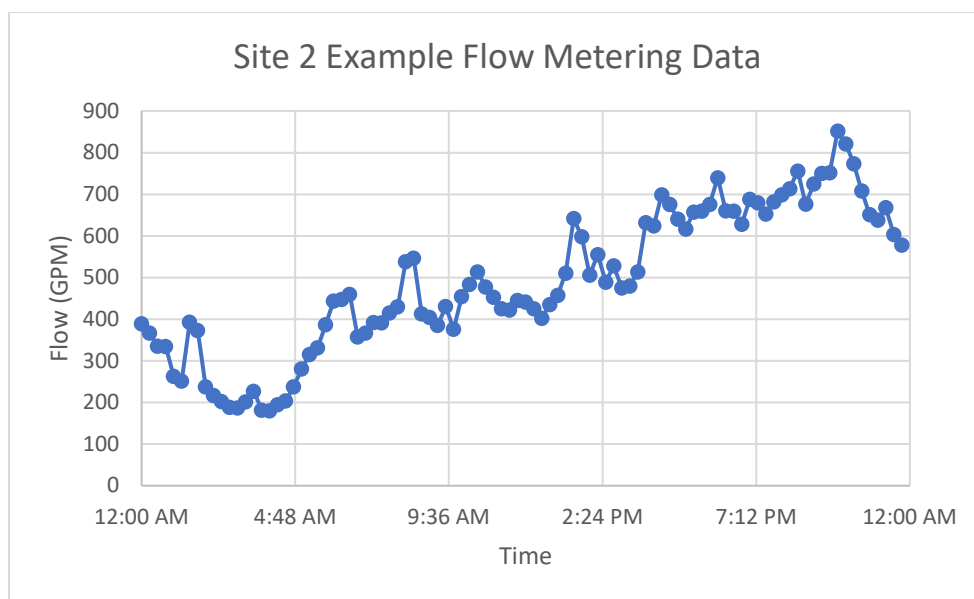


Figure 4-3 Flow Metering Data from Site 2, SSMH 7037 for Tuesday 08/08/23

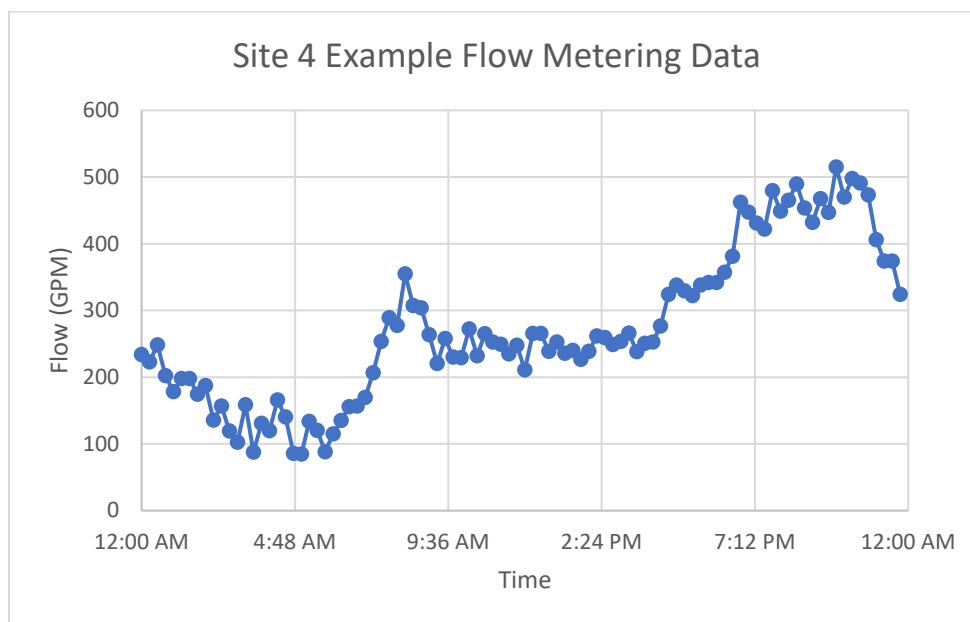


Figure 4-4 Flow Metering Data from Site 4, SSMH 7033 for Tuesday 11/28/23

4.1.4 Flow Monitoring Results

During the flow monitoring period, depth of flow, velocity, and flow rate data were collected at each meter at 15-minute intervals. The 15-minute data was aggregated into 24-hr daily totals. This daily flow data was averaged and utilized as the input for the sewer collection system hydraulic model. The sum of the flow meters at Sites 2 and 4 equals the total WWTP influent flow. The total average daily flow directed to the WWTP that was measured by the flow meters was approximately 1.1 MGD. This is consistent with the WWTP influent flow data provided to Cannon by the City for the years 2018 through 2023. During these years, the WWTP influent flows did not vary significantly, and the average influent flow was approximately 1.0 MGD.

4.2 WASTEWATER FLOW COMPONENTS

Wastewater flow is generated by routine water usage in the residential, commercial, industrial and institutional sectors of the sewer system. The flow generated has a diurnal pattern that varies depending on the type of use. The typical residential diurnal pattern has higher flows in the morning and evening hours (6AM to 9AM and 4PM to 8PM when cooking, clothes washing, dish washing, and bathing commonly occur), with moderate flows during the mid-day hours, and lower flows through the night. Commercial and industrial patterns, though they vary depending on the type of use, typically have more consistent higher flows during business hours, and lower flows at night. Furthermore, the diurnal flow pattern experienced during a weekend may vary from the diurnal flow experienced Monday through Friday.

Based on the historical flow data from the permanent influent flow meter at the City's Wastewater Treatment Plant from 2018 through 2023, the City's WWTP received an average daily flow of approximately 1.0 MGD.

4.3 EXISTING AND FUTURE SEWER FLOWS

4.3.1 Wastewater Flow Coefficients

To develop wastewater flow projections and allocate future flows to the sewer collection system, the relationship between land use and wastewater generation were identified for each land use type within the City. These relationships, called wastewater generation/flow coefficients, were established based on the average wastewater flow generated from each existing land use type. The wastewater generation coefficients established for the existing land use types were used to forecast or project the estimated average daily wastewater flow for the recently annexed undeveloped areas.

Average wastewater flow coefficients are rates, usually expressed in gallons per day per capita (gpd/person), or gallons per day per acre (gpd/ac) applied to land use acreage to calculate the average design flow generated from a particular land use. A flow coefficient was developed for each City of McFarland zoning designation. The flow coefficient provides a means to transform a zoning category from acreage into wastewater flow. The resulting flow is then input into the appropriate sewer area in the sewer collection system hydraulic model. Wastewater flow coefficients for residential areas can range between 200 to 2,000 gpd/ac, and commercial and industrial areas may range from 750 to 1,750 gpd/ac. Land use designated as agriculture and parks have a wastewater flow coefficient of 200 gpd/ac.

The wastewater flow coefficients were initially extracted from the SE (Southeast Area) Wastewater Feasibility Study prepared by Cannon in October 2017. These coefficients were then balanced (adjusted up or down) so that the total average daily wastewater flow for each of the existing zoning designations matched the total existing sewer service area flow of 1.1 MGD.

4.3.2 Existing Area Served and Future Development Average Dry Weather Flows

Developing an accurate wastewater generation estimate for the future development of the recently annexed area at build out is a crucial step in sizing the sewer facilities to serve the area, and in upsizing the existing sewer facilities to accommodate the future additional flows. The future average daily sewer flow for the recently annexed /undeveloped area was determined by multiplying the updated wastewater generation coefficients, used for the existing area served, by the recently annexed /undeveloped area land use acreage. Using this method, the estimated average daily flow of future development is 2.15 MGD. The total Average Dry Weather Flow (ADWF) for the entire City Limits, consisting of the existing area served and future development, is 3.25 MGD. Table 4-2 and Table 4-3 list the wastewater flow coefficients for each zoning designation, and the Average Daily Flow for the existing area served and future development, respectively.

**Table 4-2 Wastewater Flow Coefficients, and
Average Daily Flow for Existing Area Served**

Zoning Designation within Existing City Limits	Area (Ft ²)	Acreage	Percent of Total	Wastewater Flow Coefficient (Gal/Acre-Day)	Existing Avg. Daily Flow (MGD)
Agriculture	8,960,349	205.7	15%	200	0.041

Commercial	3,002,905	68.9	5%	1,400	0.097
Educational	4,839,618	111.1	8%	600	0.067
Industrial	395,755	9.1	1%	800	0.007
Industrial-Light	11,353,098	260.6	19%	750	0.195
Mixed Use	-	0.0	0%	1,750	0.000
Office	-	0.0	0%	825	0.000
Park	1,352,303	31.0	2%	200	0.006
Residential - Single Family	22,442,654	515.2	38%	1,000	0.515
Residential - Two Family	4,793,635	110.0	8%	1,500	0.165
Residential - Multi-Family	1,422,056	32.6	2%	2,000	0.065
Total		1344.4			1.158

**Table 4-3 Wastewater Flow Coefficients, and
Average Daily Flow for Future Development**

Proposed Annexation Zoning Designation	Area (Ft²)	Acreage	Percent of Total	Wastewater Flow Generation (Gallons/Acre-Day)	Future Avg. Daily Flow (MGD)
Agriculture	-	0.0	0%	200	0.000
Commercial	5,597,352	128.5	6%	1,400	0.180
Educational	-	0.0	0%	600	0.000
Industrial	24,419,318	560.6	27%	800	0.448
Industrial-Light	17,826,687	409.2	19%	750	0.307
Mixed Use	10,736,563	246.5	12%	1,750	0.431
Office	831,140	19.1	1%	825	0.016
Park	2,279,651	52.3	2%	200	0.010
Residential - Single Family	27,211,091	624.7	30%	1,000	0.625
Residential - Two Family	-	0.0	0%	1,500	0.000
Residential - Multi-Family	2,843,757	65.3	3%	2,000	0.131
Total		2106.2			2.148

4.4 DESIGN SEWER FLOW

Sewer system infiltration and inflow (I&I) is the term describing excess clear water from groundwater and stormwater sources that flows into the sanitary sewer system. The infiltration component is groundwater that seeps into sewer pipes through holes, cracks, joint failures and faulty connections. The inflow component is stormwater that quickly flows into sewers from roof drain downspouts, storm drain cross-connections, and through holes in manhole covers. The design sewer flow is the maximum hourly flow rate which may occur under selected design storm conditions during which I&I are expected to combine with the sewer flow and produce maximum hourly sewer flow rate conditions.

Typically, measured or estimated infiltration and inflow from a peak design storm is routed through the sewer collection system hydraulic model to estimate the peak design flow in the sewer system, and to quantify the system's capacity. Rainfall data for the southern Central Valley is collected by the California Irrigation Management Information System (CIMIS). Historical CIMIS rainfall data for the past five (5) years was obtained and reviewed by Cannon. Rainfall data for the City of McFarland was estimated by interpolating from the rainfall stations located in Shafter and Delano. Over the past five years, there have been three significant storm events that have caused the Wastewater Treatment Plant's influent flow rate to quickly rise. They include the following dates:

- January 9-10, 2023
- February 23-25, 2023
- March 9-16, 2023

There were other storm events recorded from 2018 -2022, but none of these storms caused the WWTP influent flow to rise higher than the storms of winter 2023. The January 9-10, 2023 storm caused the WWTP influent flow to rise to around 3.1 MGD. The February 23-25, 2023, storm caused the WWTP influent flow to rise to around 2.5 MGD. The March 9-16, 2023 storm caused the WWTP influent flow to rise to around 1.9 MGD. Figure 4-1, 4-6 and 4-7 show the relationship between rainfall intensity and WWTP influent flow during these three storm events. The WWTP influent flow data during these storms indicate that the City's sewer collection system does experience significant I&I during large storm events.

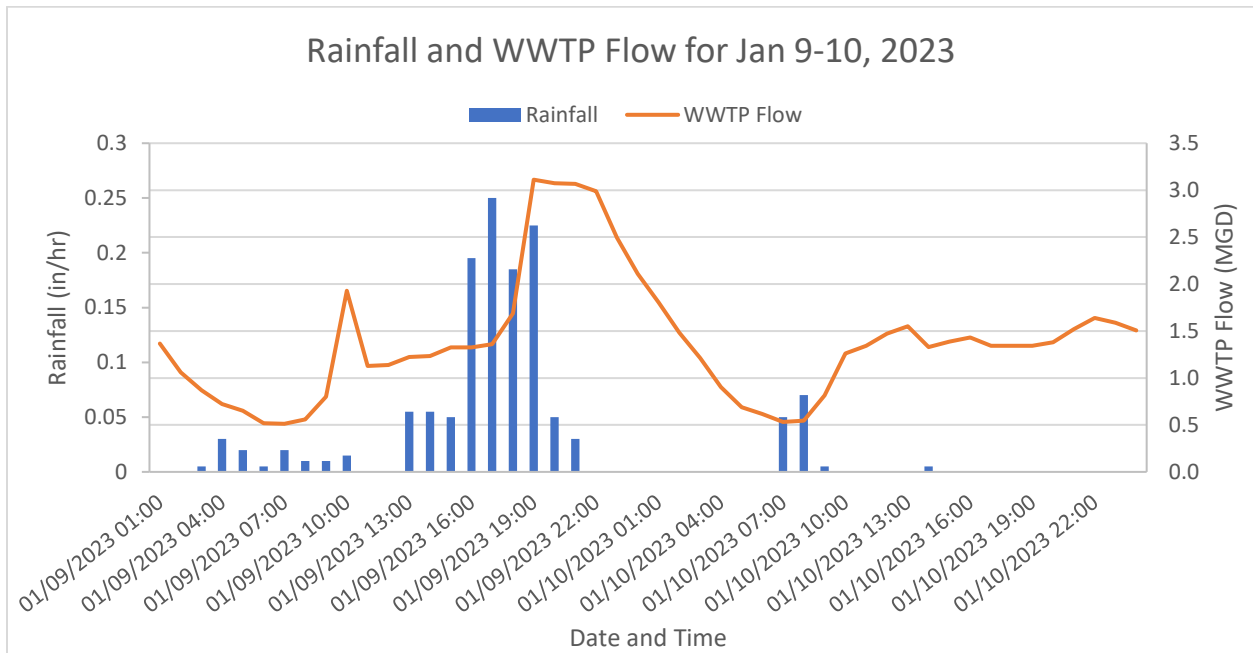


Figure 4-1 January 9-10, 2023, Rainfall and WWTP Inflow Data

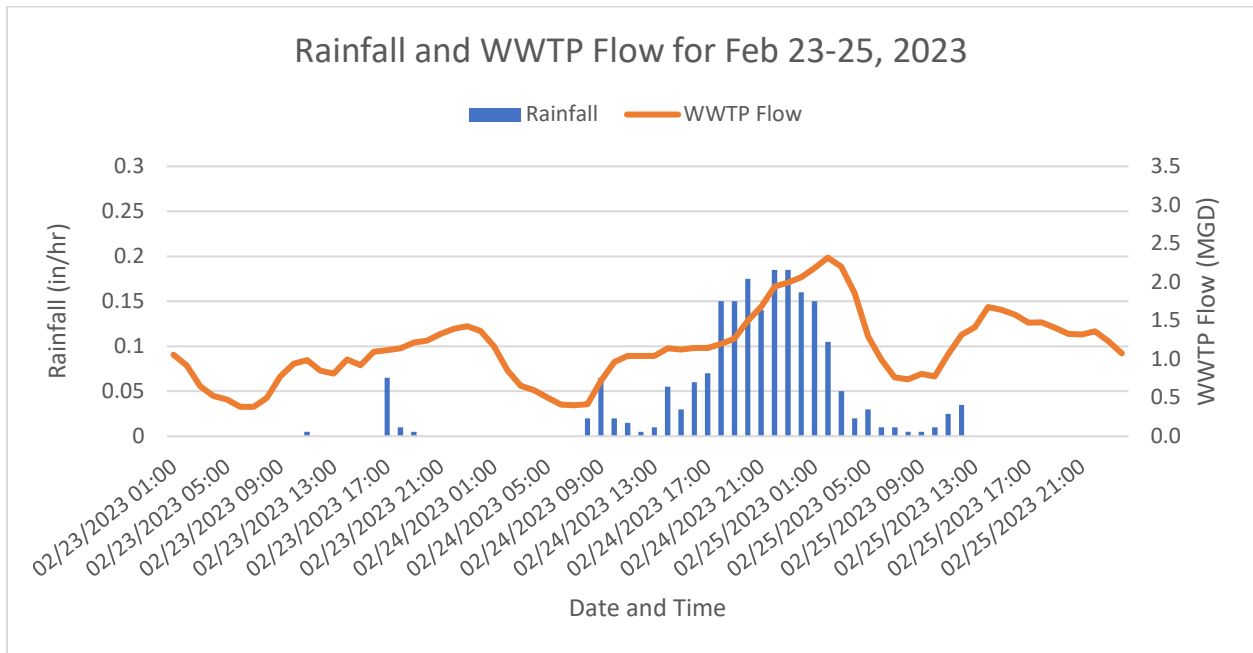


Figure 4-2 February 23-25, 2023, Rainfall and WWTP Inflow Data

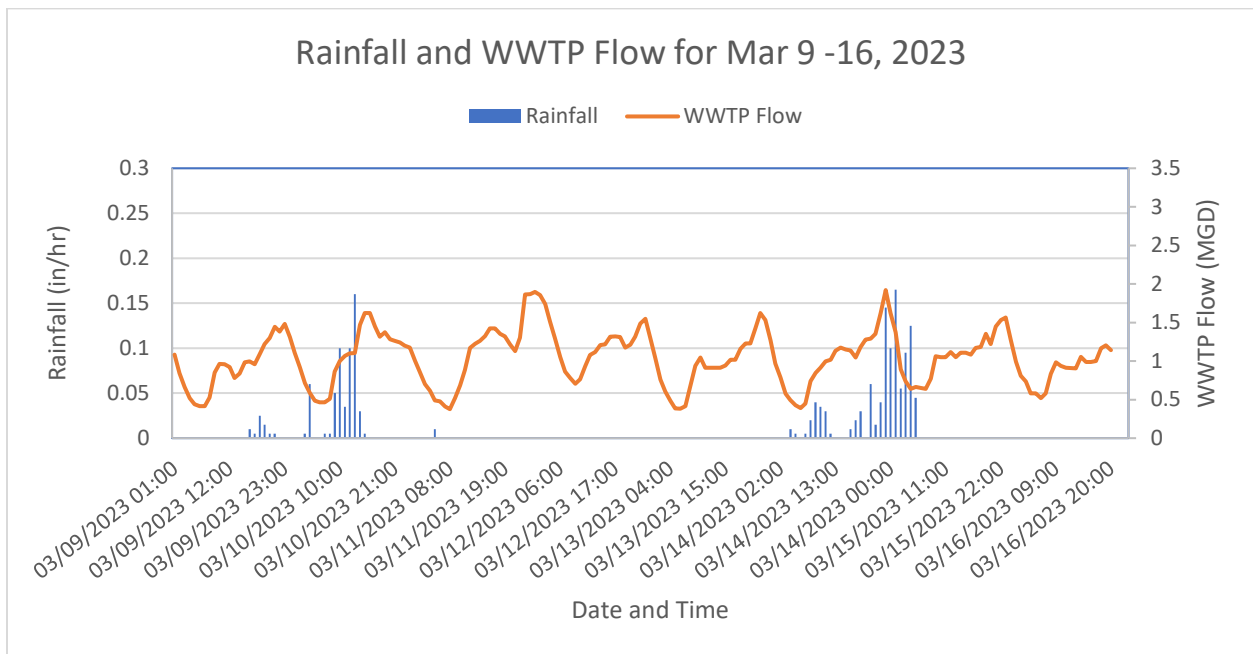


Figure 4-3 March 9-16, 2023, Rainfall and WWTP Inflow Data

The City's WWTP receives an average daily flow of roughly 1.1 MGD. The January 9-10, 2023, storms had a peaking factor of roughly 2.8, while the February 23-25, 2023, and the March 9-16, 2023, storms had peaking factors of 2.3 and 1.7 respectively. Applying a 20 percent factor of safety to the peaking factor from the largest observed storm (2.8) yields a peaking factor of 3.3. The average daily flow and this peaking factor (3.3) were used to calculate the peak discharge for the existing and future sewer collection systems.

Applying a 3.3 peaking factor to the City's average daily flow yields a Peak Wet Weather Flow of 3.83 MGD within the existing area served, and a Peak Wet Weather Flow of 7.10 MGD for the future development (recently annexed area). Combining both flows results in the Total Peak Wet Weather Flow (Design Sewer Flow) of 10.93 MGD, as presented in Table 4-4 below.

**Table 4-4 Average Daily and Peak Wet Weather Flows
for Existing and Future Development**

City Region	Total Area (acres)	Average Daily Flow (MGD)	Peaking Factor	Peak Wet Weather Flow (MGD)
Existing Area Served	1,344	1.16	3.3	3.83
Future Development	2,106	2.15	3.3	7.10
Combined Total:	3,450	3.31		10.93

5. COLLECTION SYSTEM HYDRAULIC MODEL

This chapter summarizes the development of the sewer collection system hydraulic model and model calibration.

5.1 MODELED SEWER COLLECTION SYSTEM

The hydraulic model combines information on the physical and operational characteristics of the City's sewer collection system, and performs calculations to solve a series of mathematical equations to simulate flows in pipes. It is common practice in sewer system master planning and developing a computer hydraulic model of sewer collection systems to exclude small diameter sewers (typically 8 inches in diameter and smaller) and laterals to reduce the complexity of the hydraulic model, data input requirements, file size, and model run times. The McFarland sewer collection system hydraulic model includes 10-inch diameter pipes and larger. Only at a few locations are smaller diameter sewer lines and force mains included in the model to maintain model logic or continuity between other larger diameter sewer lines. Figure 5-1 depicts the sanitary sewer mains that were modeled. The City's existing sewer lift stations are located along smaller diameter upstream sewer lines, and therefore, are not included in the hydraulic analysis.

5.1.1 *Sewer Basins and Major Interceptors*

The City's sewer collection system consist of three primary and distinct tributary areas. For the purposes of the collection system hydraulic model and this Sewer Collection System Master Plan, these three primary and distinct tributary areas were utilized.

- Northerly service area served by the Perkins Trunk Sewer Interceptor,
- Southerly service area served by the Garzoli Trunk Sewer Interceptor, and
- Recently annexed southeasterly service area to be served by a future Taylor Trunk Sewer Interceptor.

The Perkins Trunk Sewer Interceptor is one of two main arteries of the City's existing sewer collection system. Wastewater flow from the northerly portion of the City (and other areas) is conveyed through this 18" diameter interceptor, which flows in a westerly direction through the City along Perkins Avenue to the Wastewater Treatment Plant. The downstream end of the Perkins Interceptor (from Stradley Avenue westerly) will also serve as the conveyance line for future flows from the City's recently Annexed service area.

The Garzoli Trunk Sewer Interceptor is the second main artery of the City's existing sewer collection system. Wastewater flow from the southerly portion of the City (and other areas) is conveyed through this 24" diameter interceptor, which flows northerly along Garzoli Avenue, then continues westerly along Perkins Avenue, parallel to the Perkins Trunk Sewer Interceptor, and terminates at the Wastewater Treatment Plant. In addition to being one of the City's main conveyance lines, the Garzoli Trunk Sewer Interceptor provides emergency overflow capacity for the Perkins Interceptor. The overflow connection is located at the intersection of Perkins Avenue & Garzoli Avenue.

The Taylor Trunk Sewer Interceptor will become the third (future) main artery of the City's sewer collection system. Wastewater flow from the southeasterly portion of the City (recently annexed area) will be conveyed through a large diameter interceptor, which will flow westerly along Taylor

Avenue, then will continue northerly along Stradley Avenue to Perkins Avenue. At the intersection of Perkins Avenue & Stradley Avenue the Taylor Interceptor will connect to the Perkins Interceptor. At this point, the Perkins Interceptor will be upsized to convey the combined flows westerly along Perkins Avenue to the Wastewater Treatment Plant.

5.1.2 Lift Stations

As mentioned, the existing sewer lift stations are located along smaller diameter upstream sewer lines. Therefore, with simplification of the hydraulic model, the lift stations are not included in the hydraulic analysis. The locations of the City's lift stations are shown in Figure 1.2 (Chapter 1 above).

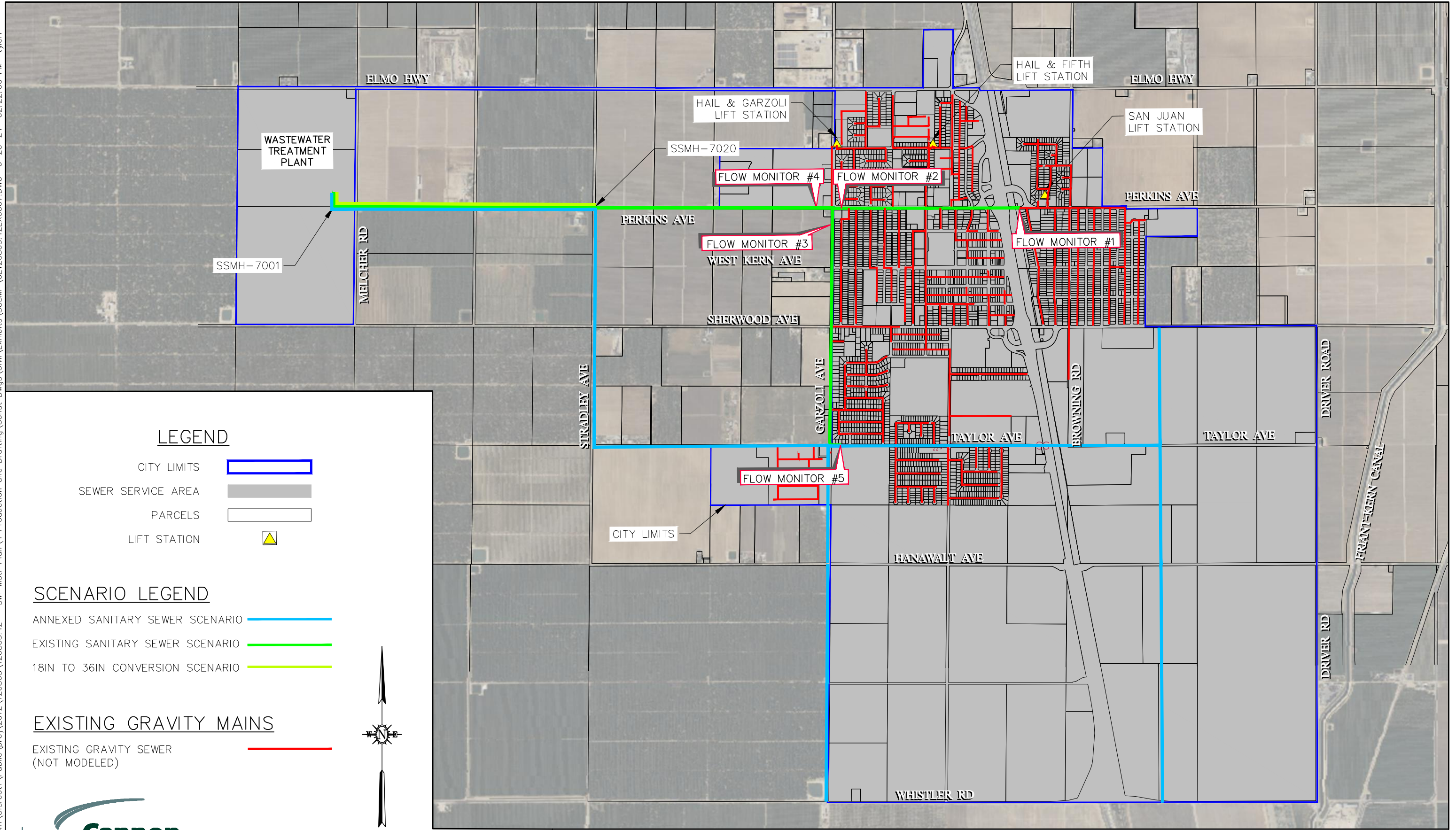
5.2 SEWER SYSTEM HYDRAULIC MODEL

A hydraulic sanitary sewer model is a computer-based tool used to simulate the behavior of a municipal sewer system. This model is designed to analyze how wastewater flows through the City's sewer network under various conditions such as different flow rates, pipe sizes, slopes, and hydraulic capacities. Here's a breakdown of hydraulic model components and their functions:

1. Geometry Representation: The model starts with a representation of the sewer system's physical layout, including pipes, manholes, junctions, and other structures. This information is often derived from GIS (Geographic Information System) data or surveyed field data.
2. Hydraulic Characteristics: Each component of the sewer system is assigned hydraulic properties such as diameter, length, roughness coefficient, slope, and elevation. These properties influence how wastewater flows through the system.
3. Flow Simulation: Using hydraulic principles and equations (such as the Manning equation or the Hazen-Williams equation), the model simulates the flow of wastewater through the sewer network. It considers factors like gravity flow, pump station operations, and inflow/infiltration (I/I) from rainfall.
4. Capacity Analysis: The model evaluates the capacity of the sewer system under different scenarios, identifying areas of potential overflow, surcharging, or hydraulic inefficiency. This helps in assessing the sewer collection system's ability to handle current and future wastewater loads.
5. Predictive Capabilities: By inputting various scenarios such as rainfall events or changes in population density, the model can predict how the sewer system will perform in the future. This assists in infrastructure planning and decision-making.
6. Calibration and Validation: Before being used for analysis and prediction, the model is calibrated and validated using historical data and field observations. This ensures that the simulated results accurately represent the real-world behavior of the sewer system.
7. Visualization and Reporting: The model often includes visualization tools to display simulation results in graphical form, such as flow profiles, pressure distributions, and capacity utilization maps. These outputs are valuable for communicating findings to stakeholders and decision-makers.

Overall, a hydraulic sanitary sewer model serves as a crucial tool for municipal engineers and planners to optimize the performance of sewer systems, minimize the risk of overflows and backups, and ensure the efficient conveyance of wastewater to treatment facilities.

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LEGEND

- CITY LIMITS
- SEWER SERVICE AREA
- PARCELS
- LIFT STATION

SCENARIO LEGEND

- ANNEXED SANITARY SEWER SCENARIO
- EXISTING SANITARY SEWER SCENARIO
- 18IN TO 36IN CONVERSION SCENARIO

EXISTING GRAVITY MAINS

- EXISTING GRAVITY SEWER (NOT MODELED)



FIGURE 5-1
SEWER COLLECTION SYSTEM MASTER PLAN
SANITARY SEWER MODEL SCENARIO RUNS
CITY OF MCFARLAND

5.2.1 Selected Hydraulic Model

There are numerous sewer analysis software available to us today. When selecting a particular model, several factors come into play:

- User Preferences: Users may have specific requirements or preferences regarding user interface, ease of use, customization options, and compatibility with other software or systems.
- Software Costs: Budgetary considerations are crucial in selecting the right software. Some software options may offer more advanced features but come with a higher price tag, while others may provide basic functionalities at a lower cost.
- Sewer System Complexity: The complexity of the sewer system being analyzed is a significant factor. Some software may be more suitable for simple, smaller-scale systems, while others are designed to handle large, complex networks with advanced modeling capabilities.
- Technical Support and Training: The availability of technical support and training resources can impact the decision-making process. Users may prefer software vendors that offer comprehensive support services and training programs to ensure they can effectively utilize the software.
- Integration and Compatibility: Integration with other software tools or compatibility with existing data formats and standards is essential for seamless workflow integration. Users may prioritize software that offers robust integration capabilities to streamline data exchange and analysis processes.
- Updates and Maintenance: Regular updates and maintenance are crucial for ensuring software reliability, security, and performance. Users may consider the frequency and quality of software updates and the vendor's track record in providing ongoing support and maintenance.
- Scalability: As sewer systems evolve and grow over time, scalability becomes important. Users may prefer software that can scale up to accommodate future expansion and increased data volumes without significant disruption or additional costs.

By carefully evaluating these factors relative to the City of McFarland, and considering their specific requirements, it was determined that the Autodesk software, InfoWorks ICM (Standard), would be best suited for the City of McFarland's sewer system hydraulic model. InfoWorks ICM is an advanced integrated catchment modeling software. It allows organizations to model complex hydraulic and hydrologic network elements quickly, accurately, and collaboratively. Autodesk InfoWorks ICM helps wastewater professionals/agencies plan for capacity improvements, system expansions, and emergency scenarios. InfoWorks ICM, version 24.2.30 (64 bit) February 2023, was used to assemble the hydraulic model.

5.2.2 Elements of the Hydraulic Model

A hydraulic model is a tool used to simulate and analyze the behavior of water within a hydraulic system, such as a sewer collection system, stormwater system, or water distribution network. The elements of a hydraulic model typically include:

- Nodes: Nodes represent points in the hydraulic system where water flow is regulated, such as junctions, manholes, or pump stations. Each node has specific properties such as elevation, pressure, and demand. Required inputs for nodes include rim elevation, invert elevation, and surcharge depth (used to represent pressurized systems).

- Links or Pipes: Links or pipes represent the conduits through which water flows between nodes. Pipes have properties such as diameter, length, material type, and roughness coefficient which influence flow characteristics such as friction loss and velocity. Input parameters for pipes include diameter, length, friction factor (e.g., Manning's n for gravity mains, Hazen Williams C for force mains), invert elevations, and whether or not the pipe is a force main.
- Hydraulic Elements: Hydraulic elements represent components within the system that affect water flow, such as wet wells, pumps, valves, gates, weirs, and orifices. These elements can be used to model flow regulation, control, and diversion within the system. Input parameters for pumps include pump curves and operational controls.
- Boundary Conditions: Boundary conditions define the external influences on the hydraulic system, such as inflow rates, outflow rates, water levels, and hydraulic gradients at specific locations. Outfalls represent areas where flow leaves the system such as the connection to the WWTP. There are three types of inflow sources that can be injected into individual model junctions/nodes: External, Dry Weather, and Rainfall Derived Infiltration & Inflows. These conditions are essential for accurately simulating the system's response to external factors.
- Hydraulic Properties: Hydraulic properties describe the physical characteristics of the system components and the properties of the fluid being transported, such as viscosity, density, and temperature. These properties are used to calculate flow rates, pressures, and other hydraulic parameters within the model.
- Control Rules: Control rules define the operational logic and decision-making criteria for system components such as pumps, valves, and gates. These rules govern the activation, deactivation, and adjustment of control devices based on system conditions and user-defined objectives.
- Demand/Generation Patterns: Generation patterns represent variations in wastewater generation within the system over time. These patterns can be spatially distributed and temporally varying, reflecting factors such as population dynamics, industrial activity, and seasonal variations.
- Modeling Software: Modeling software provides the platform for building, simulating, and analyzing the hydraulic model. It includes tools for data input, model setup, simulation control, result visualization, and analysis of hydraulic behavior under different scenarios.

By incorporating these elements into the hydraulic model and accurately representing the hydraulic system's components, properties, and boundary conditions, we can simulate various operating conditions, assess system performance, optimize design parameters, and evaluate the effectiveness of hydraulic infrastructure investments.

5.2.3 Quantifying Wastewater Flow

Quantifying the wastewater flow produced by a City and inputting the results into a hydraulic model is based on various data collection sources such as: historical wastewater flows, flow monitoring, population demographics, land use characteristics, water usage patterns, and other relevant parameters. Adequately estimating the volume of wastewater is an important process in maintaining and sizing sewer system facilities, both for present and future conditions.

Flow monitor data, as discussed in Chapter 4, was the basis for estimating existing wastewater load inputs into the hydraulic model. A peaking factor of 3.3 was applied to the average daily flow data to simulate Peak Wet Weather Flow conditions. The City of McFarland's zoning map/designations and wastewater flow coefficients discussed in Chapter 4, were used to project future wastewater flows for the recently annexed area. The loads were calculated by multiplying

the flow coefficient by the land use acreage. The model's load allocation assigned the calculated average dry weather flow to an appropriate land use area and corresponding node in the hydraulic model.

5.2.4 Sewer Tributary Areas (Existing and Future)

As described in Section 5.1.1 above, the City's sewer collection system consist of three primary and distinct tributary areas. For the purposes of the sewer collection system hydraulic model these three primary and distinct tributary areas were utilized.

- Northerly service area (Perkins Trunk Sewer Interceptor),
- Southerly service area (Garzoli Trunk Sewer Interceptor), and
- Recently annexed southeasterly service area (future Taylor Trunk Sewer Interceptor)

Each of the sewer basins was modeled separately to determine the adequacy of existing sewer pipe sizes, and required sewer pipe sizes, respectively. Each of these sewer basins was further broken down into sewer "sub-basins" to facilitate the assignment of wastewater flow to appropriate sewers. A sub-basin is a geographic area within the sewer system, such as a residential subdivision or group of blocks, where wastewater generated in the area was injected into a single node in the model.

5.2.5 Hydraulic Model Construction

Constructing a hydraulic model involves several steps to accurately represent the behavior of a hydraulic system. Following is an overview of the typical process:

1. Data Collection: The first step is to gather relevant data about the hydraulic system being modeled. This includes information such as topographical data (elevations and slopes), pipe network geometry (lengths and diameters), hydraulic elements (lift station pumps, valves, etc.), boundary conditions (inflows and outflows), and any other parameters that influence system behavior.
2. Geospatial Data Processing: Geospatial data, including topographical maps, aerial imagery, and GIS data, are processed to create a digital representation of the study area. This may involve digitizing maps, importing GIS data, and using specialized software to create an accurate spatial model of the hydraulic system.
3. Model Geometry: Using the collected data, the geometric layout of the hydraulic system is constructed in the modeling software. This includes defining the location and characteristics of nodes (junctions and manholes) and links (pipes and channels) that comprise the network. The connectivity between nodes and links is established based on the physical layout of the system.
4. Parameterization: Hydraulic parameters such as pipe roughness coefficients, pump curves, valve settings, and demand patterns are assigned to the appropriate components within the model. These parameters influence flow characteristics, pressures, and other hydraulic properties within the system.
5. Boundary Conditions: Boundary conditions are specified to represent external influences on the hydraulic system, such as inflows from tributary areas, outflows to treatment facilities or receiving water bodies, and hydraulic gradients at system boundaries. These conditions are essential for accurately simulating system behavior.
6. Model Calibration: Once the model is set up, it is calibrated by adjusting model parameters to match observed system behavior. Calibration involves comparing simulated results with field data and making adjustments to improve the accuracy of the

model's predictions. This iterative process continues until satisfactory agreement between simulated and observed data is achieved.

7. Simulation: With the calibrated model, hydraulic simulations are performed to analyze system behavior under various scenarios. Simulations may include steady-state analyses to assess flow distribution and pressures under normal operating conditions, as well as transient analyses to evaluate system response to dynamic events such as pump failures or flow surges.
8. Validation: The model's accuracy and reliability are validated by comparing simulated results with independent field measurements or additional data that were not used in the calibration process. Validation ensures that the model can accurately predict system behavior under a range of conditions and provides confidence in its use for decision-making purposes.
9. Analysis and Reporting: Finally, the results of the hydraulic simulations are analyzed and interpreted to gain insights into system performance, identify potential issues or vulnerabilities, and inform decision-making. A comprehensive report documenting the model construction process, calibration results, simulation findings, and recommendations is typically prepared for stakeholders.

5.3 HYDRAULIC MODEL CALIBRATION

Hydraulic model calibration is the process of adjusting the parameters and inputs of a hydraulic model to improve its accuracy and reliability in representing the real-world hydraulic system it is simulating. Calibrating the hydraulic model to match data collected during the flow monitoring program ensures the most accurate results possible.

For this project, due to budgetary and scheduling constraints, only dry weather flow (DWF) monitoring was conducted, and average flows were utilized rather than developing diurnal flow patterns. Flow meters were established at various sanitary sewer manhole locations throughout the City. Refer to Figure 4.1 (Chapter 4 above) for flow meter locations. DWF refers to the flow of wastewater in a sewer system during periods of minimal or no rainfall. Hydraulic models incorporate DWF as a crucial component in simulating the behavior of sewer networks under normal operating conditions. Dry weather flow calibration ensures an accurate depiction of average wastewater flow generated within the study area. For the purposes of this Master Plan and based on available data from historical storm events, wet weather calibration was considered not necessary.

5.3.1 Dry Weather Flow Calibration

Hydraulic model calibration typically incorporates the steps listed below. Due to the availability of accurate flow data obtained from field flow monitoring some aspects of the calibration for this hydraulic model were simplified.

1. Data Collection: Accurate estimation of DWF requires comprehensive data collection, including historical flow data, population demographics, land use characteristics, water usage patterns, and other relevant parameters. This data serves as the basis for developing representative DWF for the hydraulic model.
2. Flow Estimation: Various methods can be used to estimate DWF, depending on the availability of data and the complexity of the sewer system. Common approaches include empirical methods based on population density and water usage rates, statistical analysis of historical flow data, and hydraulic modeling techniques.

3. Temporal and Spatial Distribution: DWF profiles are typically characterized by temporal variations throughout the day, week, month, and year, reflecting fluctuations in water usage patterns such as residential, commercial, and industrial activities. Spatial distribution considers the geographical distribution of population and land use within the sewer network.
4. Base Flow and Infiltration/Inflow (I/I): DWF includes base flow, which represents continuous, low-level wastewater flow from sources such as residential, commercial, and industrial properties. In addition to base flow, hydraulic models may account for infiltration/inflow (I/I), which refers to the intrusion of groundwater or stormwater into the sewer system, particularly in older or deteriorated infrastructure. I/I is essentially the difference between the DWF and wet weather flow.
5. Model Calibration: Calibration of hydraulic model involves adjusting parameters, including DWF profiles, to match observed flow data under dry weather conditions. Calibration ensures that the model accurately represents the system's behavior and can reliably predict flow patterns and hydraulic performance.
6. Scenario Analysis: Hydraulic models can simulate various scenarios to evaluate the effects of changes in DWF patterns, such as population growth, land use changes, water conservation measures, and infrastructure upgrades. Scenario analysis helps decision-makers assess the long-term implications of different strategies for managing the sewer system.

6. COLLECTION SYSTEM CONDITION ASSESSMENT

This chapter presents the methodology and findings of the limited closed circuit television video inspections, condition assessment of select manholes, and condition assessment of the City's three sewer lift stations.

6.1 PERKINS CCTV VIDEO INSPECTION

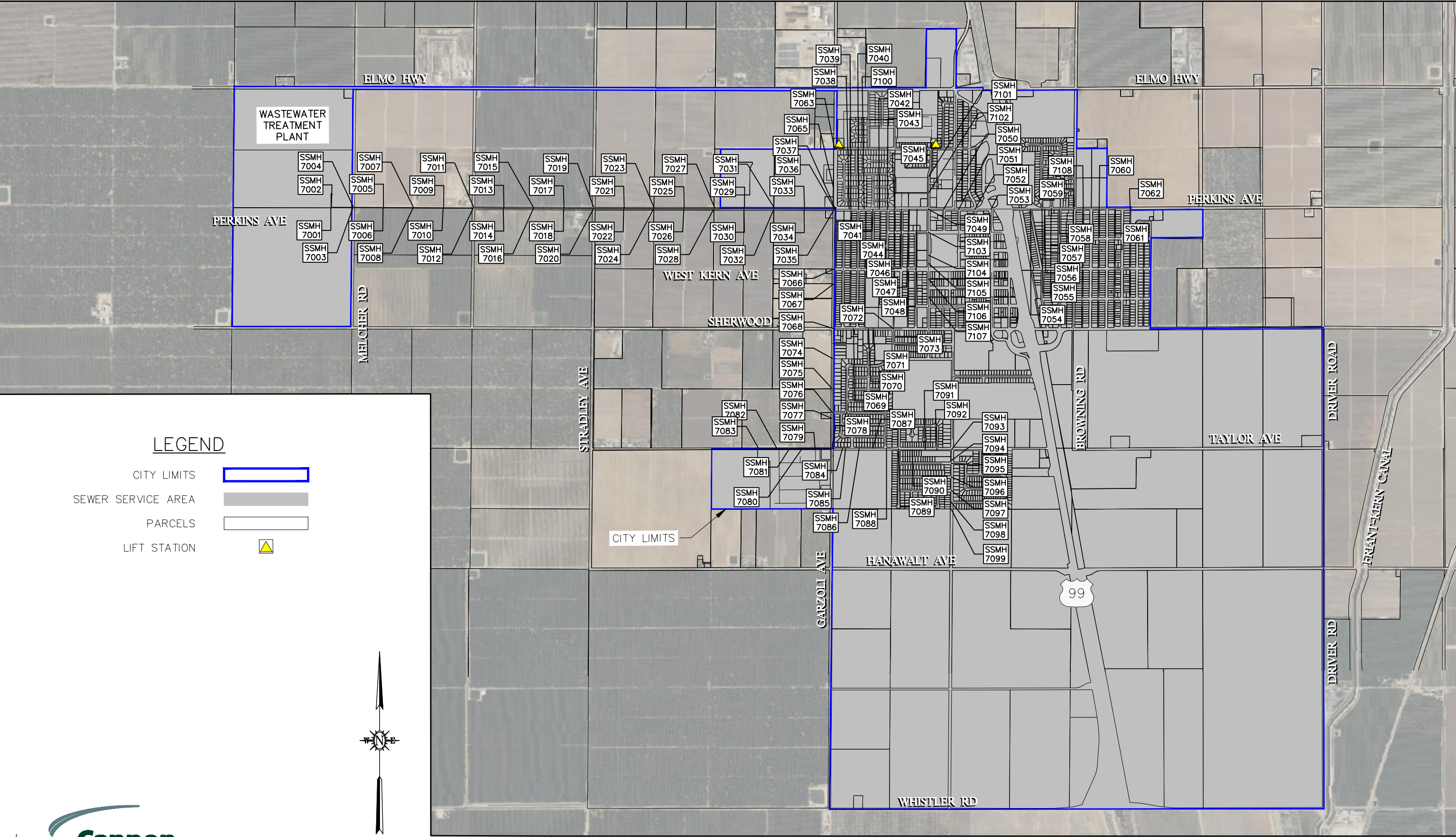
6.1.1 Methodology

Key segments of the sewer collection system were identified by City staff to be video inspected using closed circuit television (CCTV) based on input from Cannon. Figure 6-1 shows the location of sanitary sewer manholes within the City limits. Downstream Services, Inc (DSI) conducted the sewer CCTV video inspections, using their state-of-the-art equipment, from December 4 through 8, 2023. DSI technicians are certified through the Pipeline Assessment Certification Program (PACP) of the National Association of Sewer Service Companies (NASSCO). NASSCO is a trade organization established in 1976 to increase the awareness of aging underground infrastructure, and to provide solutions through education and technical resources. Table 6-1 below lists the general location of the existing trunk sewer lines that were video inspected.

Table 6-1 Video Inspected Trunk Sewer Lines

Sewer Location & Size	From	To	Length (FT)
18" Perkins Trunk Sewer	WWTP Headworks	Fifth Street	13,056
24" Garzoli Trunk Sewer (Perkins Ave)	WWTP Headworks	West of Hiett Avenue	2,818
12" Perkins Trunk Sewer	Fifth Street	Second Street	1,400
Total Length:			17,274

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LEGEND

- CITY LIMITS
- SEWER SERVICE AREA
- PARCELS
- LIFT STATION

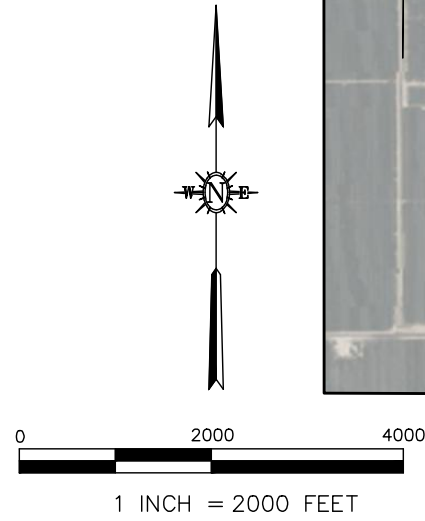


FIGURE 6-1
SEWER COLLECTION SYSTEM MASTER PLAN
SANITARY SEWER MANHOLES
CITY OF MCFARLAND



Results of CCTV Video Inspections

The CCTV video inspections found the existing 24" Perkins trunk sewer to be in good condition, although a few sags were noted. Due to the good condition observed in the 24" trunk sewer line, video inspection of this line was discontinued after five segments. The video inspection found that several segments of the 18" Perkins trunk sewer need rehabilitation due to extensive fractures and wandering cracks. Large obstructions at a few locations were also noted, possibly due to rags and heavy grease buildup. The portion of 12" Perkins trunk sewer that was video inspected had only a few locations where minor repairs are needed. Two of the five 12" Perkins segments had previously been lined with a cured-in-place-pipe (CIPP) liner. The results of the CCTV video inspections are summarized in Table 6-2 below. [Appendix B](#) contains a copy of an abbreviated version of the Downstream Services, Inc. Inspection Report. The full DSI Inspection Report is very lengthy and has been provided to the City as a separate submittal. For the purposes of the Sewer Master Plan and inspection reporting, Cannon assigned manhole numbers to all relevant manholes throughout the City's sewer collection system.

Table 6-2 CCTV Video Inspection Results Summary

Sewer Line Section	D. S. Manhole No.	U. S. Manhole No.	Pipe Length (FT)	Major Defects
Perkins 18" VCP	Headworks	7001	299	1 sag of 2.7" – 34 LF 4 sections multiple fractures – total 33 LF
Perkins 18" VCP	7001	7003	496	1.5 SF surface damage at soffit 4 sections multiple fractures – total 133 LF
Perkins 18" VCP	7003	7006	675	1 sag of 1.8" – 128 LF 40 LF of defective repair 6 sections multiple fractures – total 213 LF
Perkins 18" VCP	7006	7008	676	1 sag of 1.8" - 29 LF 10% obstruction (1 location) 666 LF wandering crack
Perkins 18" VCP	7008	7010	230	225 LF with multiple fractures
Perkins 18" VCP	7010	7012	446	2 LF large crack, soil visible 5 sections multiple fractures – total 255 LF
Perkins 18" VCP	7012	7014	676	1 sag of 0.9" - 43 LF 4 sections multiple fractures – total 436 LF
Perkins 18" VCP	7014	7016	678	3 sags 1.8" to 4.5" – total 135 LF 9 sections multiple fractures – total 412 LF
Perkins 18" VCP	7016	7018	677	4 sags 0.9" to 4.5" – total 277 LF ⁽¹⁾ 6 sections multiple fractures – total 307 LF
Perkins 18" VCP	7018	7020	678	3 sections multiple fractures – total 553 LF
Perkins 18" VCP	7020	7022	675	4 sections multiple fractures – total 370 LF
Perkins 18" VCP	7022	7024	677	3 sags 2.7" to 3.6" – total 448 LF ⁽¹⁾ 4 sections multiple fractures – total 272 LF

Sewer Line Section	D. S. Manhole No.	U. S. Manhole No.	Pipe Length (FT)	Major Defects
Perkins 18" VCP	7024	7026	680	4 sags 1.8" to 3.6" – total 230 LF ⁽¹⁾ 4 sections multiple fractures – total 223 LF
Perkins 18" VCP	7026	7028	678	25% obstruction (2 locations) heavy grease obstruction (2 locations) 4 sections multiple fractures – total 39 LF
Perkins 18" VCP	7028	7030	676	5 sections multiple fractures – total 91 LF
Perkins 18" VCP	7030	7032	671	2 sags 1.8" to 3.6" – total 124 LF 7 sections multiple fractures – total 174 LF
Perkins 18" VCP	7032	7034	674	1 sag 2.7" – total 162 LF 3 sections multiple fractures – total 10 LF
Perkins 18" VCP	7034	7035	675	1 section multiple fractures – total 2 LF
Perkins 18" VCP	7035	7037	33	None
Perkins 18" VCP	7037	7038	303	25% obstruction (1 location)
Perkins 18" VCP	7038	7039	43	1 section multiple fractures – total 2 LF
Perkins 18" VCP	7039	7040	165	None
Perkins 18" VCP	7040	7100	130	None
Perkins 18" VCP	7100	7041	198	3 SF broken pipe, soil visible
Perkins 18" VCP	7041	7042	140	None
Perkins 18" VCP	7042	7043	188	None
Perkins 18" VCP	7043	7044-7045	165	1 section multiple fractures – total 25 LF
Perkins 18" VCP	7045	7046	153	None
Perkins 18" VCP	7046	7047	168	None
Perkins 18" VCP	7047	7048	176	None
Perkins 18" VCP	7048	7049	257	1 sag 2.7" – total 67 LF

Sewer Line Section	D. S. Manhole No.	U. S. Manhole No.	Pipe Length (FT)	Major Defects
Perkins 24" PVC	Headworks	7002	290	1 sag of 2.4" – 15 LF
Perkins 24" PVC	7002	7004	497	1 sag of 4.8" – 69 LF
Perkins 24" PVC	7004	7005	679	3 sags of 1.2" - total 210 LF ⁽¹⁾
Perkins 24" PVC	7005	7007	679	None
Perkins 24" PVC	7007	7009	673	None
Perkins 12" VCP	7049	7050	342	6 sections multiple fractures – total 22 LF
Perkins 12" VCP	7050	7051	364	1 section multiple fractures – total 2 LF
Perkins 12" VCP CIPP	7051	7052	360	8" lateral connection defective (1 location)
E. Perkins 12" VCP CIPP	7052	7053	355	1 sag 2.4" – total 52 LF
E. Perkins 12" VCP	7053	7054	864	1 sag 7.2" – total 99 LF 10" lateral connection defective (1 location) 3 sections multiple fractures – total 35 LF
Notes: 1. Sewer line segments with flat pipe slopes and greater depth of flow, may appear as multiple lengthy sags.				

6.2 PERKINS, GARZOLI, TAYLOR, AND FIFTH MANHOLE INSPECTIONS

6.2.1 Methodology

Key and representative manholes in the sewer collection system were identified by City staff to be visually inspected based on input from Cannon. Cannon visually inspected and photographed the manholes during June, July, and August 2023. A total of 28 manholes were visually inspected and photographed as summarized in the list below.

- 2 manholes at the WWTP headworks,
- 14 manholes along Perkins Avenue,
- 4 manholes along Garzoli Avenue,
- 5 manholes along Taylor Avenue, and
- 3 manholes along Fifth Street.

6.2.2 Results of Manhole Inspections

The manhole inspections found most manholes to be in relatively good condition. However, along Perkins Avenue, nine (9) manholes need recoating, and one (1) needs replacement. Figure 6.1 shows interior photos of Manhole 7004 that needs replacement. Also, the inspection found no manholes experiencing infiltration. A few manholes need routine cleaning/hydro-jetting. The results of the manhole inspections are summarized in Table 6-2 below. Condition of the components of each manhole were rated as either good (G), fair (F), or poor (P). For the purposes of the Sewer Master Plan and inspection reporting, Cannon assigned manhole numbers to all relevant manholes throughout the City's sewer collection system.



Figure 6-1 Interior of Manhole 7004

Table 6-2 Manhole Inspection Results

Manhole No.	Location	Noted Condition
<u>Headworks</u> <u>18" line</u>	WWTP	Rim/Cover: F Walls: P Base: NA Infiltration: No
Headworks 24" line	WWTP	Rim/Cover: F Walls: G Base: F Infiltration: No
<u>7001</u>	Perkins w/o Garzoli	Rim/Cover: P Walls: P Base: P Infiltration: No
<u>7002</u>	Perkins w/o Garzoli	Rim/Cover: F Walls: P Base: NA Infiltration: No
<u>7003</u>	Perkins w/o Garzoli	Rim/Cover: F Walls: P Base: NA Infiltration: No
<u>7004</u>	Perkins w/o Garzoli	Rim/Cover: P Walls: P Base: P Infiltration: No

Manhole No.	Location	Noted Condition
<u>7005</u>	Perkins w/o Garzoli	Rim/Cover: P Walls: P Base: P Infiltration: No
<u>7006</u>	Perkins w/o Garzoli	Rim/Cover: P Walls: P Base: P Infiltration: No
<u>7007</u>	Perkins w/o Garzoli	Rim/Cover: P Walls: P Base: P Infiltration: No
<u>7008</u>	Perkins w/o Garzoli	Rim/Cover: P Walls: P Base: P Infiltration: No
<u>7011</u>	Perkins w/o Garzoli	Rim/Cover: P Walls: P Base: P Infiltration: No
<u>7012</u>	Perkins w/o Garzoli	Rim/Cover: P Walls: P Base: P Infiltration: No
<u>7019</u>	Perkins w/o Garzoli	Rim/Cover: P Walls: P Base: P Infiltration: No
7035	Perkins & Garzoli	Rim/Cover: G Walls: G Base: NA Infiltration: No
7036	Perkins & Garzoli	Rim/Cover: G Walls: G Base: NA Infiltration: No
7037	Perkins & Garzoli	Rim/Cover: G Walls: G Base: NA Infiltration: No
7063	Garzoli & Hail	Rim/Cover: G Walls: G Base: NA Infiltration: NA
<u>7068</u>	Garzoli & Sherwood	Rim/Cover: G Walls: F Base: F Infiltration: No
7076	Garzoli & Kyra	Rim/Cover: F Walls: G Base: G Infiltration: No
7078	Garzoli & Taylor	Rim/Cover: G Walls: G Base: G Infiltration: No
-	Taylor & Melgar	Rim/Cover: G Walls: G Base: G Infiltration: No
-	Taylor & Mast	Rim/Cover: G Walls: G Base: G Infiltration: No
-	Taylor & Fletcher	Rim/Cover: G Walls: G Base: G Infiltration: No
-	Taylor & Garden Prince	Rim/Cover: G Walls: G Base: G Infiltration: No

Manhole No.	Location	Noted Condition
-	Taylor & Price	Rim/Cover: G Walls: G Base: NA Infiltration: No
7102	Fifth (711 Fifth)	Rim/Cover: G Walls: G Base: NA Infiltration: No
7101	Fifth (799 Fifth)	Rim/Cover: G Walls: G Base: NA Infiltration: NA
-	Fifth & Hail	Rim/Cover: G Walls: G Base: NA Infiltration: NA

6.3 EXISTING LIFT STATION INSPECTIONS

6.3.1 Methodology

The City has three small existing sewer lift stations located: at the intersection of Hail Lane & Fifth Street, at the intersection Hail Lane & Garzoli Avenue, and along San Juan Street south of Fernwood Street. As requested by the City, Cannon inspected the three sewer lift stations on June 27, 2023. Cannon visually inspected the facilities, recorded lift station characteristics and condition, and photographed the facilities. Cannon also spoke with City staff to note any existing operational problems that they had identified. The inspection was limited to what could be seen on the surface and through the access manholes/hatches. Submerged items were not inspected. The visual inspection included lift station features such as site improvements, electrical panels, control panels, access manholes/hatches, wet well interior, and visible valves, piping, guide rail system, and hardware.

6.3.2 Results of Lift Station Inspections

The sewer lift station inspections found the facilities to be in good condition for their age. However, each lift station had some deficiencies or significant maintenance needs. Deficiencies and maintenance needs identified at each lift station are summarized in Table 6-3 below. Figures 6-2 and 6-3 provide photographs of various deficiencies and maintenance needs at the Hail & Fifth Lift Station, and San Juan Lift Station, respectively.

Table 6-3 Lift Station Deficiencies & Maintenance Needs

Lift Station Feature	Hail & Fifth Lift Station	Hail & Garzoli Lift Station	San Juan Lift Station
Site Fencing/Security:	Needs area lighting.	Needs area lighting.	None
Site Improvements:	None	None	None
Electrical Panel:	Some old wiring needs replacement. Needs pigtail added for generator connection.	Voltage problem needs to be addressed.	Needs pigtail added for generator connection.
Control Panel:	Control panel needs replacement similar to Hail & Garzoli LS.	None	Control panel needs replacement similar to Hail & Garzoli LS.
Access Manhole/Hatch:	Access hatch frame and cover needs replacement.	None	None
Wet Well Interior:	Wet well interior needs coating.	None	Wet well interior needs coating.
Wet Well Valves & Piping:	None	None	None
Wet Well Guide Rail System:	None	None	None
Pumps:	None (Pumps were recently replaced.)	Pumps need replacement similar to Hail & Fifth LS.	Pumps need replacement similar to Hail & Fifth LS.
Other Notes:	Upgrades should be modeled after the Hail & Garzoli LS.	Delayed communication problem needs to be addressed.	Upgrades should be modeled after the Hail & Garzoli LS.

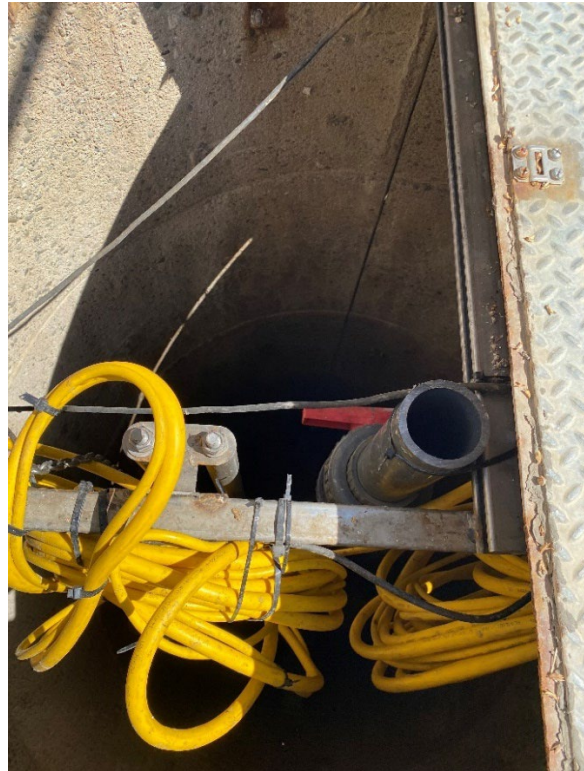


Figure 6-2 Hail & Fifth LS Control Panel and Access Hatch



Figure 6-3 San Juan LS Control Panel and Wet Well

7. CAPACITY EVALUATION AND RECOMMENDED IMPROVEMENTS

As described in Chapter 5, development of parcels within the recently annexed areas will require numerous 8" and 10" sewer lines that feed into trunk sewer lines running through the annexed areas. These future trunk sewer lines will then merge together into a single large trunk sewer line and tie into the existing "Perkins" Trunk Sewer Line in Perkins Avenue in route to the WWTP. One of the goals of the hydraulic modeling was to identify preliminary future trunk sewer line sizes and slopes required to be able to serve the fully developed recently annexed areas. To accomplish this, a preliminary alignment was developed for the future trunk sewer lines through the recently annexed areas (later referred to as the Stradley-Taylor Trunk Sewer Line).

The hydraulic model discussed in Chapter 5, the Design Sewer Flows developed in Chapter 4, and the evaluation (design) criteria presented in Chapter 3, were used to identify capacity deficiencies within the existing sewer collection system, and to size future trunk sewer lines needed to service the recently annexed areas. The existing sewer collection system, and future trunk sewer lines were evaluated under existing conditions, and future peak flow conditions assuming the recently annexed areas were fully developed. As previously mentioned, the existing sewer lift stations are located along smaller diameter upstream sewer lines, and therefore, were not included in the hydraulic analysis.

This chapter presents the results of the sewer collection system capacity analysis, and the improvements recommended to address identified capacity deficiencies. In addition, recommended design criteria for the future Stradley-Taylor Trunk Sewer undercrossing of Highway 99 are presented.

7.1 COLLECTION SYSTEM CAPACITY ANALYSIS RESULTS

7.1.1 Existing System

Hydraulic modeling of the existing sewer collection system, based on existing average daily flows, found the collection system piping to be adequately sized. Hydraulic modeling of the existing sewer collection system based on existing peak wet weather flows found five segments of 12" sewer line along Perkins Avenue, beginning at Fifth Street and extending upstream, having a depth of flow exceeding that recommended. The depth of flow in the five 12" segments exceeds the recommended maximum capacity by less than 15 percent. Therefore, this condition of over-capacity is considered tolerable as long as future developments do not add flows to these segments.

In addition, hydraulic modeling of the existing sewer collection system based on existing peak wet weather flows found one segments of 18" sewer line along Perkins Avenue to be over-capacity by 7 percent, and eight segments of 18" sewer line and two segments of 24" sewer line to be under-capacity but within 10 percent of the recommended maximum capacity. The condition of over-capacity for the segment of 18" sewer line is tolerable as long as future development does not add flow to this segment. Likewise, the other eight segments of 18" sewer line and two segments of 24" sewer line that are near capacity should be flagged, and the need for upsizing evaluated if any future developments propose to add flows to these lines. The remainder of the trunk collection system piping is adequately sized under existing peak wet weather flow conditions. As a result, no existing sewer pipes are in need of upsizing at this time due to existing peak wet weather flows. Table 7-1 below summarizes these findings.

**Table 7-1 Existing System Concerns and Deficiencies
Based on Peak Wet Weather Flows**

DS Manhole No.	US Manhole No.	Model Pipe No.	Pipe Dia. (inches)	Exist. Peak Flow (gpm)	Exist. d/D
7049	7050	39	12	470	0.556
7050	7051	38	12	470	0.586
7051	7052	127	12	470	0.560
7052	7053	126	12	470	0.554
7053	7054	125	12	470	0.627
7006	7008	29	18	1,107	0.661
7008	7010	28	18	1,107	0.705
7014	7016	25	18	1,108	0.817
7026	7028	19	18	1,108	0.659
7028	7030	18	18	1,108	0.669
7032	7034	16	18	1,108	0.662
7034	7035	15	18	1,108	0.669
7035	7037	14	18	1,108	0.707
7037	7038	13	18	470	0.726
7002	7004	71	24	1,413	0.678
7004	7005	70	24	1,413	0.702

7.1.2 Future System

As mentioned above, one of the goals of the hydraulic modeling is to identify preliminary future trunk sewer line sizes and slopes required to be able to serve the recently annexed areas once fully developed. To accomplish this, a preliminary alignment was developed for the future trunk sewer lines from the WWTP extending southeasterly to the recently annexed areas. However, it was determined that having three trunk sewer lines in Perkins Avenue would be undesirable. Therefore, in the hydraulic model, the future trunk sewer line connects to the existing sewer system at the intersection of Perkins Avenue & Stradley Avenue (Manhole 7020). Downstream of this connection point the existing 18" trunk sewer line in Perkins Avenue was replaced and

upsized to 36" all the way to the WWTP to accommodate existing flows plus the recently annexed areas. In the Hydraulic Model, this proposed 36" diameter trunk sewer line is designated as Pipe Segment 11-CA.

Therefore, the future trunk sewer line runs south down Stradley Avenue to Taylor Avenue where it turns east and extends down Taylor Avenue to the recently annexed areas both west and east of Highway 99. Also, at the WWTP, the existing 24" line and "proposed" 36" sewer line could be combined into a single 42" sewer line from Perkins Avenue to the WWTP Headworks. Figure 7-1 illustrate the schematic layout of the Future Trunk Sewer Lines to serve the recently annexed areas. It should be noted that although not recommended, instead of replacing and upsizing the existing 18" sewer line in Perkins Avenue, a third trunk sewer line (30" diameter) could be run down Perkins Avenue to serve the recently annexed areas.

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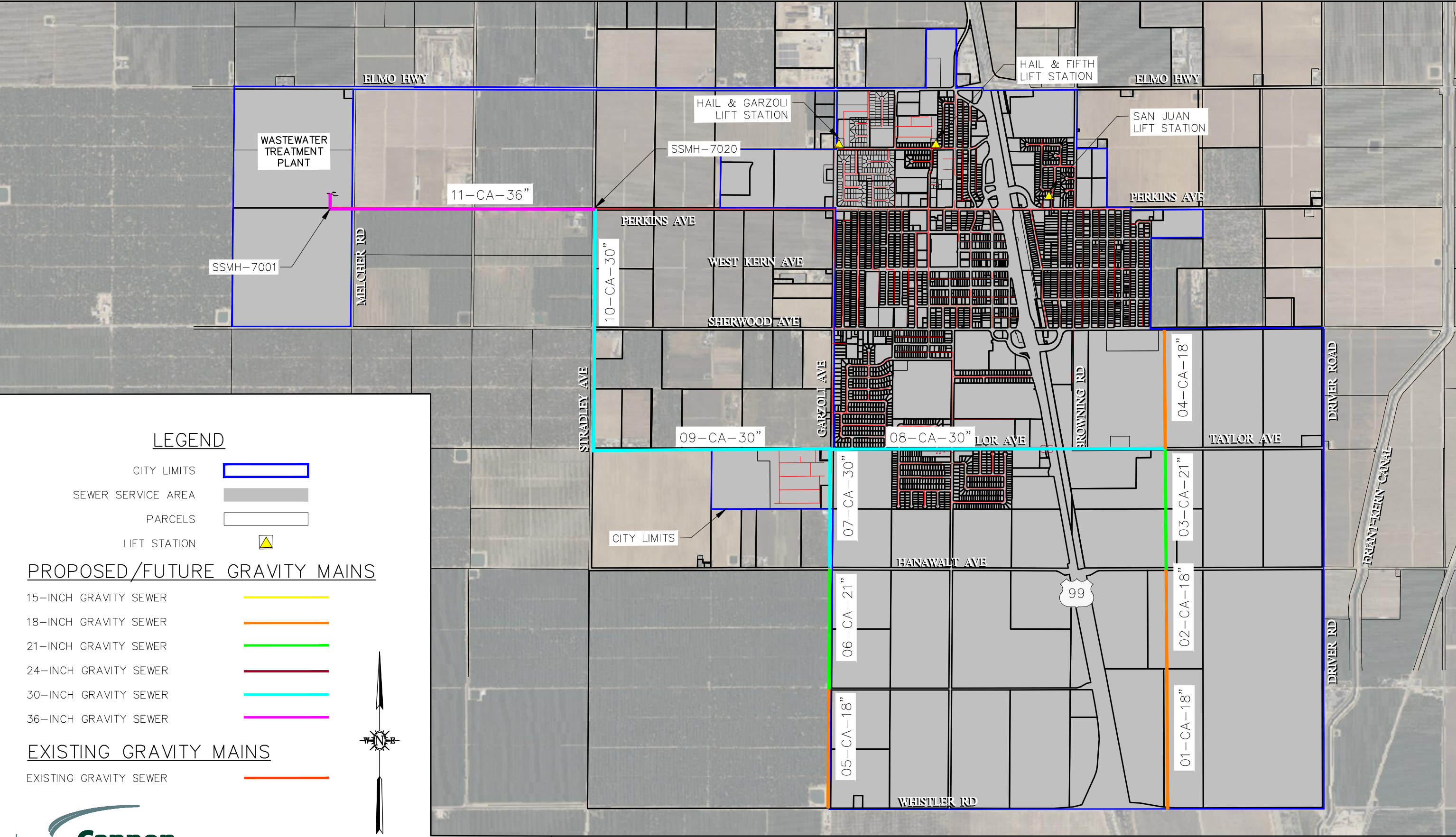


FIGURE 7-1
SEWER COLLECTION SYSTEM MASTER PLAN
FUTURE TRUNK SEWER LINES TO SERVE RECENTLY ANNEXED AREA
CITY OF MCFARLAND



The future trunk sewer lines were evaluated under future average daily flow and peak wet weather flow conditions assuming the recently annexed areas were fully developed. Initial pipe sizes and pipe slopes were selected and evaluated using the hydraulic model. An iterative process was used to then adjust the pipe sizes and pipe slopes to arrive at optimal conditions. The vertical control point for the hydraulic model is Manhole 7001 in Perkins Avenue at the entrance to the WWTP with an approximate existing invert in elevation of 325.0 feet. The future trunk sewer line connects to the existing sewer system east of this at the intersection of Perkins Avenue & Stradley Avenue (Manhole 7020) at an approximate existing invert out elevation of 331.0.

Trunk sewer line sizes required to convey flows through the recently annexed areas and to the WWTP range in size from 18" diameter up to 30" diameter (plus upsizing the Perkins Trunk Sewer Line {in Perkins Avenue} from 18" to 36"). Beginning at Manhole 7020, the pipe slope for the first segment of future trunk sewer line in Stradley Avenue was set near minimum to increase the sewer line depth from approximately 8.5 feet to approximately 14 feet. This first segment of sewer line covers a distance of approximately 4,848 feet. The sewer line depth was then maintained at approximately 14 feet throughout the remainder of the future trunk sewer system by setting pipe slopes to generally match the slope of the existing ground topography. The resulting pipe slopes exceeded the minimum allowable slopes based on the design criteria outlined in Chapter 3.

The recommended preliminary design pipe sizes and slopes for the future trunk sewer collection system to serve the recently annexed areas (Stradley-Taylor Trunk Sewer) are presented in Table 7-2 below. Based on the hydraulic modeling, the appropriate pipe size for a few segments of future trunk sewer line resulted in depth of flow within 10 percent of the recommended maximum capacity. These segments (shown in bold) should be re-evaluated to confirm the appropriate pipe sizes once more accurate flow calculations are available based on actual planned development projects.

**Table 7-2 Recommended Future Trunk Sewer Line
Sizes and Slopes (Stradley-Taylor Trunk Sewer Line)**

Model Pipe No.	Future Peak Flow (gpm)	Pipe Slope	Required Pipe Diameter (inches)	Resulting d/D
11-CA (Perkins)	6,027	0.0010	36	0.390
10-CA (Stradley)	4,919	0.0012	30	0.713
09-CA (Taylor)	4,919	0.0017	30	0.672
08-CA (Taylor)	2,525	0.0014	30	0.598
07-CA (Fifth)	2,394	0.0019	30	0.598
06-CA	1,796	0.0017	21	0.539
05-CA	917	0.0014	18	0.669
04-CA	698	0.0010	21	0.610
03-CA	1,827	0.0015	21	0.610
02-CA	1,416	0.0016	18	0.698
01-CA	706	0.0020	18	0.659

7.2 RECOMMENDED IMPROVEMENTS

7.2.1 Project Categories

Recommended improvement projects are categorized as follows:

- Maintenance Related Projects,
- Existing Capacity Related Projects, and
- Future Development/Capacity Related Projects

Maintenance related improvements focus on rehabilitating existing facilities, and are generally not designed to address capacity issues. Existing capacity related improvements focus on upsizing existing facilities to address existing capacity deficiencies. Future development/capacity related improvements are those required to accommodate future peak wet weather sewer flows as a result of full development of the recently annexed areas.

7.2.2 Maintenance Related Improvements

The maintenance related improvements recommended for the existing collection system and sewer lift stations are summarized in Table 7-3 below.

**Table 7-3 Recommended
Maintenance Related Improvements**

Project Name ¹
Manhole and Wet Well Interior Coating Project
Manhole and Lift Station Access Improvement Project
Lift Station Control Panel & Electrical Upgrade Project
Lift Station Pump Replacement Project
Manhole Replacement Project
Trunk Sewers CCTV Inspection
Notes: 1. See Chapter 8 for a description of each project and explanation of need.

7.2.3 Existing Capacity Related Improvements

As indicated above, although hydraulic modeling of the existing sewer collection system based on existing peak wet weather flows found one segments of 18" sewer line along Perkins Avenue to be over-capacity by 7 percent, this condition of over-capacity is tolerable as long as future development does not add flow to this segment. Therefore, no improvements to the existing collection system are recommended at this time to address existing peak flow capacity deficiencies.

7.2.4 Future Development/Capacity Related Improvements

Based on the less than desirable condition of the existing 18" trunk sewer, and to avoid the undesirable situation of a third large trunk sewer line in Perkins Avenue, it is recommended that the existing 18" Perkins Trunk Sewer be replaced and upsized with a new single line capable of handling the peak wet weather flows from the existing service area and those of the recently annexed areas. As indicated above, a 36" diameter trunk sewer line is required in Perkins Avenue (from the WWTP to Stradley Avenue) to accommodate peak wet weather flows from the recently annexed areas plus existing flows within the 18" diameter Perkins Trunk Sewer.

Therefore, it is recommended that the existing 18" Perkins trunk sewer line be replaced and upsized from the WWTP to the intersection of Perkins Avenue & Stradley Avenue (from Manhole 7001 to Manhole 7020) with a new 36" diameter trunk sewer line. In the Hydraulic Model, this 36" diameter trunk sewer line in Perkins Avenue is designated as Pipe Segment 11-CA. Pipe Segment 11-CA and the remainder of the trunk sewer to serve the recently annexed area is referred to as the Stradley-Taylor Trunk Sewer Line.

It is also recommended that the short segments of existing trunk sewer lines from Perkins Avenue to the WWTP Headworks be replaced and consolidated with a single 42" diameter line able to accommodate existing flows and those of the recently annexed area. The recommended future development/capacity related improvements to accommodate full development of the recently annexed areas are summarized in Table 7-4 below.

**Table 7-4 Recommended
Future Trunk Sewer Line Improvements**

Model Pipe Segment No.	Pipe Slope	Pipe Diameter (inches)	Approximate Pipe Length (feet)
7001/7002		18/24	400
Perkins 31 – 23 (11-CA)	0.0010	36 ¹	5,767
10-CA (Stradley)	0.00	30	4,848
09-CA (Taylor)	0.0013	30	5,172
08-CA (Taylor)	0.0014	30	8,758
07-CA (Fifth)	0.0019	30	2,581
06-CA	0.0017	21	3,314
05-CA	0.0014	18	3,294
04-CA	0.0010	18	2,550
03-CA	0.0015	21	3,163
02-CA	0.0016	18	3,061
01-CA	0.0020	18	3,541
Notes: 1. 36" diameter trunk line is required here to be able to accommodate existing peak wet weather flows from the existing Perkins Trunk Sewer Area plus the recently annexed areas.			

7.3 DESIGN PARAMETERS FOR TAYLOR AVENUE HIGHWAY 99 UNDERCROSSING

As previously mentioned, beginning at Manhole 7020, the pipe slope for the first segment of future trunk sewer line was set to increase the sewer line depth to approximately 14 feet. The sewer depth was then maintained at approximately 14 feet throughout the remainder of the future trunk sewer system. Pipe slopes were set slightly steeper than the minimum design criteria, and the pipes paralleled the existing ground topography. This produced a preliminary design sewer line depth of approximately 14 feet at the Taylor Avenue and Highway 99/UPRR intersection. Although a casing pipe will be required to convey the future trunk sewer line under Hwy 99 and the UPRR tracks, an inverted sewer siphon should not be required here. This future crossing may be accomplished under gravity flow conditions and designed based on the design criteria outlined in Chapter 3.

In the unlikely event an inverted sewer siphon is needed here in the future (dipping below the hydraulic grade line) to avoid an obstruction such as railway or freeway cut, it is recommended to follow the design criteria set forth in “Design and Construction of Sanitary and Storm Sewers” published by the Joint Committee of the American Society of Civil Engineers and the Water Pollution Control Federation. Also, the following design features and guidelines are recommended for inverted siphons:

- Utilize a multiple-barrel siphon to provide self-cleaning velocities under widely varying flow conditions.
- Design so that a self-cleaning velocity of 3 feet per second is reached at least once per day.
- Use a conservative Hazen-Williams friction loss coefficient such as $C=100$.
- Address odors from exhausting air at upstream manhole.

8. CAPITAL IMPROVEMENT PLAN

This chapter presents preliminary project costs, and a recommended 10-Year Capital Improvement Program (CIP) to implement the facility upgrades to address existing system deficiencies and accommodate the future additional sewer flows from the recently annexed areas.

8.1 PROJECT COSTS

The Association for the Advancement of Cost Engineering (AACE) guidelines for cost estimating practices and classification are being used to prepare the construction cost estimates for the Sewer Collection System Master Plan. The cost opinions developed for the Sewer Master Plan are considered Class 4 Estimates, which are defined by AACE as follows:

“Class 4 estimates are generally prepared based on limited information and subsequently have fairly wide accuracy ranges. They are typically used for project screening, determination of feasibility, concept evaluation, and preliminary budget approval. Typically, engineering is from 1% to 15% complete, and would comprise at a minimum the following: preliminary room layouts, new proposed site plan, existing site plan, markups of existing drawings for demolition and utilities, design criteria report or technical memorandum by division of work.”

The construction cost opinions are anticipated to be within an accuracy range of -20% to +30%. Materials, equipment, and labor costs are based on a variety of sources including recent bids, actual project costs, and cost opinions from similar projects.

8.2 CAPITAL IMPROVEMENT IMPLEMENTATION

The recommended Capital Improvement Program covers a 10-year period. Some projects can be implemented within a single fiscal year. However, some projects are multi-year projects and may take two years or more to implement. For multi-year projects, costs shown in the final year are for construction and construction management, while costs shown in earlier years cover preliminary engineering, environmental work (if applicable), final design, and the bidding phase.

The recommended 10-Year Capital Improvement Program for the City of McFarland Sewer Collection System is presented in Figure 8-1 below. Costs shown for the recommended Capital Improvement Projects are based on detailed preliminary cost estimates. Preliminary Project Cost Estimates are included in [Appendix C](#).

Figure 8-1

City of McFarland - Sewer Collection System Master Plan

10-Year Capital Improvement Program

FY 2024-25 thru 2033-34

Capital Project Name, Description & Need	Total Project Cost	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	FYs 2031 - 2034
Manhole and Wet Well Interior Coating Project <i>Description :</i> Apply epoxy/polyurathane protective coating to interior walls of 12 manholes, and the Hail & Fifth and San Juan Lift Station wet wells. <i>Maintenance Need :</i> The highly corrosive environment inside the manholes and wet wells gradually deteriorates the concrete walls of the manholes and wet wells and can lead to structural failure, and increased infiltration. The project will extend the useful lives of the manholes and wet wells and reduce infiltration.	\$ 144,000	\$ 144,000						
Manhole and Lift Station Access Improvement Project <i>Description :</i> Remove and replace 9 deteriorated manhole rims and collars, and the existing deteriorated access hatch at the Hail & Fifth Lift Station. <i>Maintenance Need :</i> Several concrete collars, rims and covers at manholes have deteriorated and will eventually lead to unsafe access and roadway conditions. Also, the hinges and other hardware of the Hail & Fifth Lift Station access hatch have corroded and are now in an unsafe and unsecure condition. The manhole collars, rims and covers, and the access hatch must be replaced to restore safety, security, and a safe operating condition of the Lift Station.	\$ 156,000	\$ 156,000						
Lift Station Control Panel & Electrical Upgrade Project <i>Description :</i> Remove and replace the existing control panels at the Hail & Fifth and San Juan Lift Stations, and incorporate pig tails for emergency generator connection. Add emergency/security lighting to the Hail & Fifth and Hail & Garzoli Lift Stations. Replace deteriorated wiring at the Hail & Fifth Lift Station, and address voltage and communication problem at the Hail & Garzoli Lift Station. <i>Maintenance Need :</i> The control panels are antiquated, have reached the end of their useful lives, and are in need of replacement to avoid failure of the Lift Stations. Pig tails for connection of an emergency generator are needed to allow for Lift Station operation during an extended power outage. Security/emergency lighting is needed to improve site security and enable nighttime emergency response. Other minor electrical problems need to be addressed to ensure smooth and reliable operation of the Lift Stations.	\$ 274,000	\$ 18,000	\$ 256,000					
Lift Station Pump Replacement Project <i>Description :</i> Remove and replace the submersible pumps at the Hail & Garzoli and San Juan Lift Stations. <i>Maintenance Need :</i> The existing pumps are nearing the end of their useful lives, and are in need of replacement before they fail and cause an emergency situation. Pump replacement will ensure smooth and reliable operation of the Lift Stations.	\$ 236,000		\$ 16,000	\$ 220,000				
Manhole Replacement Project <i>Description :</i> Remove and replace the existing heavily deteriorated Manhole 7004 in Perkins Avenue along the 24" diameter Perkins/Garzoli Trunk Sewer Line. <i>Maintenance Need :</i> The highly corrosive environment inside manholes gradually deteriorates the concrete walls of the manholes and can lead to structural failure, and increased infiltration. The deterioration of Manhole 7004 is beyond repair, and total replacement is required.	\$ 52,000			\$ 52,000				
Trunk Sewers CCTV Inspection <i>Description :</i> Perform a closed circuit television (CCTV) inspection of all trunk sewer lines 12-inches in diameter and larger. <i>Maintenance Need :</i> As a result of settlement, traffic loading, corrosion, and other forces, sewer lines may deteriorate over time and need rehabilitation or replacement. Periodic inspection every 5 to 7 year is recommended to address needs in a timely manner and avoid pipeline failures.	\$ 110,000						\$ 110,000	
Consolidated Headworks Trunk Sewer Line Project	\$ 1,086,000				\$ 58,000	\$ 1,028,000		

Figure 8-1

City of McFarland - Sewer Collection System Master Plan

10-Year Capital Improvement Program

FY 2024-25 thru 2033-34

Capital Project Name, Description & Need	Total Project Cost	2024-25	2025-26	2026-27	2027-28	2028-29	2029-30	FYs 2031 - 2034
Description : Install approximately 400 LF of new consolidated 42" trunk sewer line from Perkins Avenue into the Wastewater Treatment Plant to the headworks. This new headworks sewer line will consolidate and be able to handle the combined flows for The Perkins Trunk Line, Garzoli Trunk Line and Taylor Trunk Line (recently annexed area) and replace the existing 18" and 24" sewer lines to the Plant headworks. Capacity Need : Addition of sewer flows from the recently annexed area to the existing 18" and 24" trunk lines extending from Perkins Avenue to the WWTP headworks will significantly exceed the capacity of these lines and may lead to a major sewer overflow. A new consolidated larger trunk sewer line is needed to handle addition of the sewer flows from the recently annexed area and prevent a serious sewer spill.								
Perkins Avenue Trunk Sewer Line Upgrade Project Description : Remove and replace/upsizes approximately 5,767 LF of existing 18" Perkins Trunk Sewer Line to 36" trunk sewer line in Perkins Avenue from the WWTP to Stradley Avenue. This will upsize the "Perkins" segment of the new Stradley-Taylor Trunk Sewer Line to handle peak wet weather flows from the existing Perkins Trunk Sewer areas plus the recently annexed areas. Capacity Need : Based on the Sewer Master Plan analysis, significant additional trunk sewer capacity is needed in Perkins Avenue to accommodate peak wet weather flows from the recently annexed areas. Based on the condition of the existing 18" trunk sewer line it makes the most sense to replace this line with a 36" line and avoid over congesting Perkins Avenue with three large trunk sewer lines.	\$ 8,271,000							\$ 8,271,000
Stradley-Taylor Trunk Sewer (Middle Segments) Project Description : Install approximately 18,778 LF of new 30" Stradley-Taylor Trunk Sewer Line in Stradley Avenue and Taylor Avenue (referred to as the Middle Segments) to handle peak wet weather flows from the recently annexed areas. The Stradley Segment extends from Perkins Avenue to Taylor Avenue. The Taylor Segment extends from Stradley Avenue to approximately 2,500 feet east of Highway 99. Refer to Figure 7-1 of the Sewer Master Plan. Capacity Need : A new trunk sewer network is needed to provide sewer service to the recently annexed areas. Based on the Sewer Master Plan analysis, 30" diameter trunk sewer lines are needed for the Middle Segments of the Stradley-Taylor Trunk Sewer Line to accommodate peak wet weather flows from the recently annexed areas.	\$ 22,235,000							\$ 22,235,000
Stradley-Taylor Trunk Sewer (Upstream Segments) Project Description : Install approximately 12,446 LF of new 18", 6,477 LF of new 21" and 2,581 LF of new 30" Stradley-Taylor Trunk Sewer Line in Garzoli Avenue and east of Highway 99 (referred to as the Upstream Segments) to handle peak wet weather flows from the recently annexed areas. Refer to Figure 7-1 of the Sewer Master Plan. Capacity Need : A new trunk sewer network is needed to provide sewer service to the recently annexed areas. Based on the Sewer Master Plan analysis, 18", 21" and 30" diameter trunk sewer lines are needed for the Upstream Segments of the Stradley-Taylor Trunk Sewer Line to accommodate peak wet weather flows from the recently annexed areas.	\$ 17,787,000							\$ 17,787,000
Grand Total:	\$ 50,351,000	\$ 318,000	\$ 272,000	\$ 272,000	\$ 58,000	\$ 1,028,000	\$ 110,000	\$ 48,293,000

8.3 EXISTING VERSUS FUTURE USERS COST SHARE

The proposed Capital Improvement Program includes a variety of projects, some of which are associated with the existing sewer collection system, and some of which are associated with existing flows plus those to come from the recently annexed area. As a result, determining a fair distribution of responsibility and cost is an important consideration. How Capital Improvement Project costs are proposed to be distributed and/or shared is described below.

8.3.1 Existing Users Cost

Upgrades to address deficiencies and maintenance related projects associated with the existing sewer collection system shall be the responsibility of the existing users/customers with exception of improvements along Perkins Avenue downstream (west) of Stradley Avenue. Existing users shall bear the cost of such improvements.

8.3.2 Future Users Cost

All improvements upstream of the intersection of Perkins Avenue & Stradley Avenue (associated with the Stradley-Taylor Trunk Sewer Line) to serve the future users within the recently annexed area shall be the responsibility of said future users/customers. The future users shall bear the cost of such improvements.

8.3.3 Shared Cost

All improvements along Perkins Avenue downstream (west) of Stradley Avenue to provide for shared facilities to convey flows from the recently annexed area as well as existing customers shall be the shared responsibility of the future and existing users/customers. The future and existing users shall share the cost of such improvements. Capital Improvement costs shall be shared based on the percentage of flow to be handled by the new facility coming from the recently annexed area (future) verses flows coming from the existing served area as indicated in the formulas below.

- Future Customers Share (%) =
$$\frac{\text{Flow from recently annexed area}}{\text{Total combined flow}}$$
- Existing Customers Share (%) =
$$\frac{\text{Flow from existing area}}{\text{Total combined flow}}$$

REFERENCES

The following documents were reviewed and referenced in the preparation of this Sewer Collection System Master Plan:

- *Regional Plan/Sustainable Communities Strategy*, Kern Council of Governments, 2022
- *General Waste Discharge Requirements for Sanitary Sewer Systems - Order Number 2022-0103-DWQ*, State Water Resources Control Board, December 6, 2022
- *2040 General Plan*, City of McFarland, August 2021
- *Regional Plan/Sustainable Communities Strategy*, Kern Council of Governments, 2018
- *City of McFarland Comprehensive Sewer Study- Tract 7270 & 7292*, Cannon, September 2017
- *City of McFarland SE (Southeast Area) Wastewater Feasibility Study*, Cannon, October 2017
- *General Plan Amendment Environmental Impact Report*, City of McFarland, April 2016
- *Regional Plan/Sustainable Communities Strategy*, Kern Council of Governments, 2014
- *City of McFarland Wastewater Treatment Master Plan*, Cannon, August 2013
- *City of McFarland Wastewater Master Plan*, Boyle, 2006

TECHNICAL APPENDICES

Gold Coast Environmental Sewer Flow Reports
DSI Sewer CCTV Inspection Report (Abbreviated)
Preliminary Project Cost Estimates

APPENDIX A - GOLD COAST ENVIRONMENTAL SEWER FLOW REPORTS

CITY OF MCFARLAND - SEWER FLOW STUDY

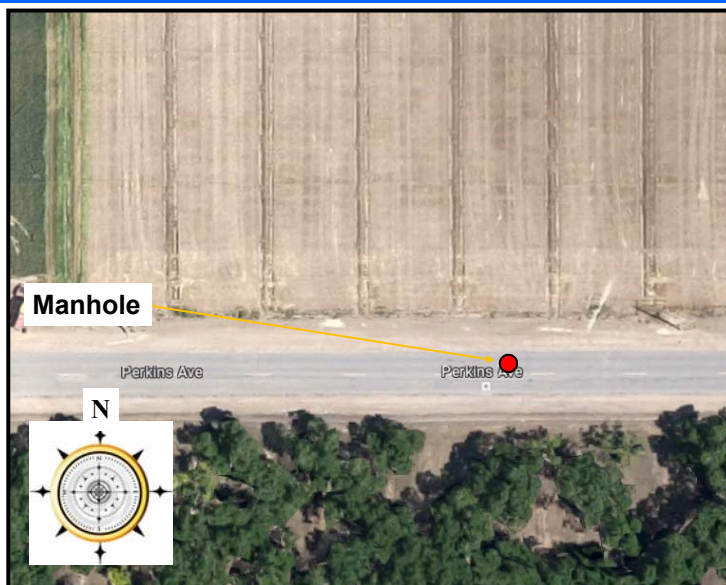
MH Location: **MH-7033**

**Perkins Rd., west of Garzoli Ave.
McFarland, CA 93250**

Pipe Size: **24" VCP**

Time Period: **11/22/2023 - 12:00 a.m. to
12/5/2023 - 12:00 a.m.**

GPS: **35.681631, -119.243109**



Manhole - Layout



Equipment

Teledyne Isco 2150 Area Velocity Flow Meter with 10' measuring range:

Level Measurement:

- Method - Submerged pressure transducer mounted in the flow stream
- Transducer Type - Differential linear integrated circuit pressure transducer
- Range (standard) 0.033 to 10 ft (0.010 to 3.05 m); Maximum Allowable Level 34 ft (10.5 m)
- Accuracy ± 0.01 ft from 0.033 to 10 ft, (± 0.003 m from 0.01 to 3.05 m,)
- Long-Term Stability ± 0.023 ft/yr (± 0.007 m/yr)
- Compensated Range 32° to 122°F (0° to 50°C)

Velocity Measurement:

- Method - Doppler ultrasonic, frequency 500 kHz
- Typical Minimum Depth 0.08 ft (25 mm)
- Range -5 to +20 ft/s (-1.5 to +6.1 m/s)
- Accuracy (in water with uniform velocity profile, speed of sound = 4850 ft/s, for indicated velocity range) ± 0.1 ft/s from -5 to 5 ft/s (± 0.03 m/s from— 1.5 to +1.5 m/s)
- $\pm 2\%$ of reading from 5 to 20 ft/s (1.5 to 6.1 m/s)

Method Of Insertion:

- 24 inch line requires confined space entry for installation of ring and transducer.



Gold Coast Environmental

Specializing in process instrumentation and calibration.

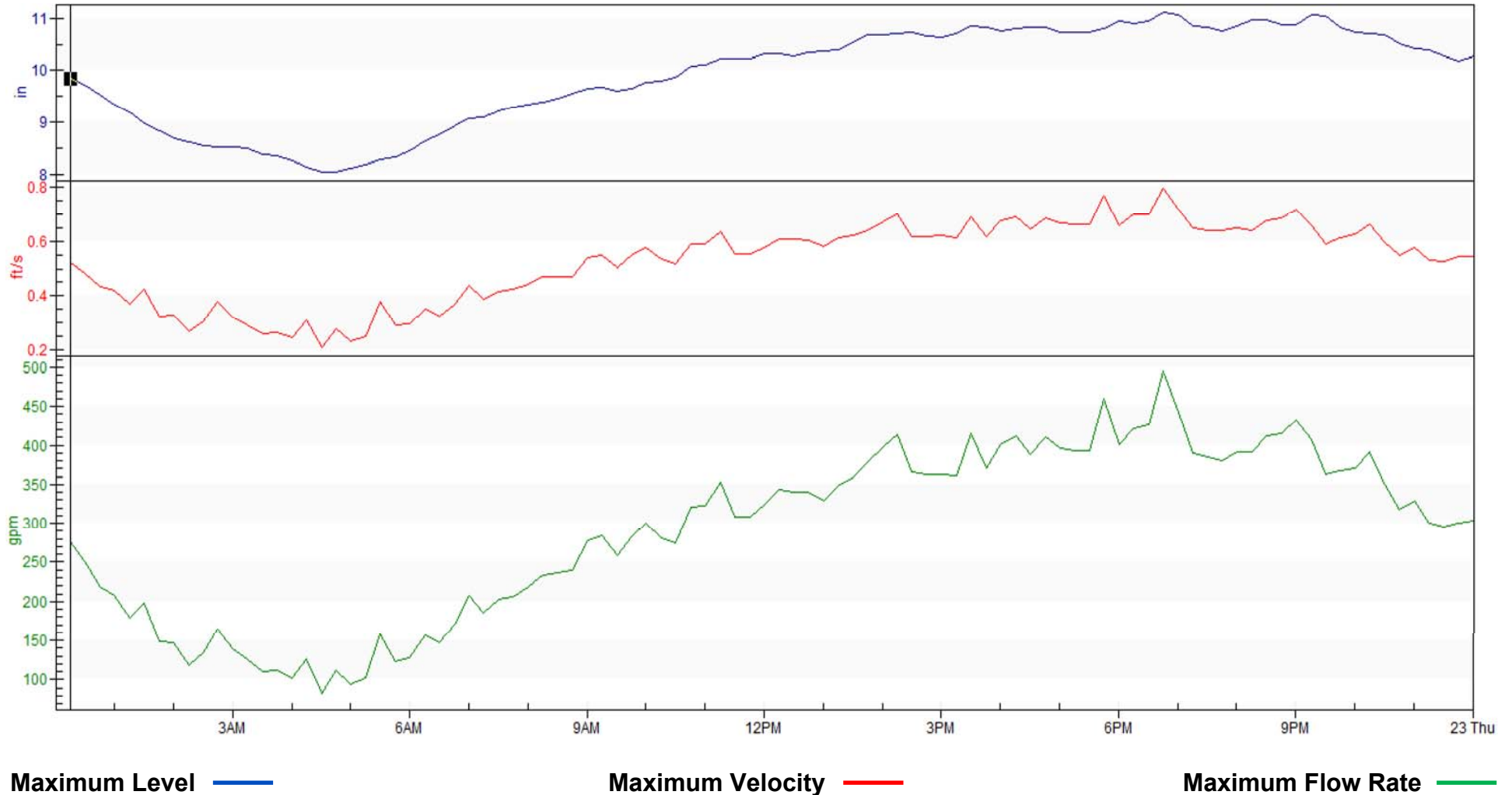


1868 Palma Drive, Suite I, Ventura, CA 93003

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805.498.3811 ph.

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**
Location: **MH-7033**
Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**
Time Period: **11/22/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Wednesday - A.M. 11/22/2023

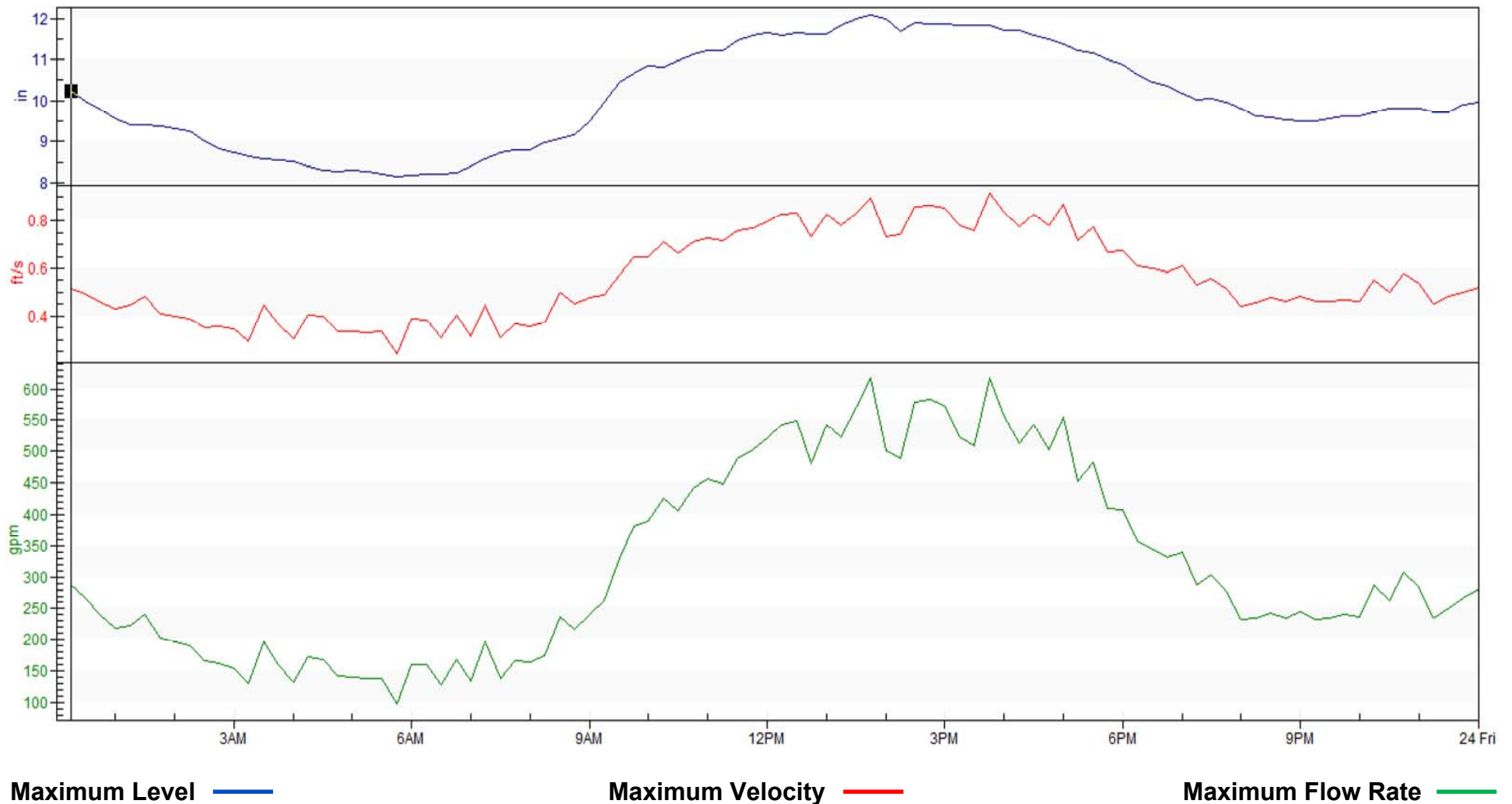
Time	Level	Velocity	Flow
12:15:00 AM	9.846	0.523	276.62
12:30:00 AM	9.72	0.482	250.972
12:45:00 AM	9.535	0.433	219.503
1:00:00 AM	9.344	0.422	208.193
1:15:00 AM	9.204	0.37	179.315
1:30:00 AM	8.986	0.423	198.052
1:45:00 AM	8.846	0.322	147.986
2:00:00 AM	8.697	0.326	146.438
2:15:00 AM	8.628	0.266	118.096
2:30:00 AM	8.548	0.305	133.873
2:45:00 AM	8.53	0.376	164.223
3:00:00 AM	8.523	0.32	139.699
3:15:00 AM	8.502	0.289	125.879
3:30:00 AM	8.389	0.259	110.792
3:45:00 AM	8.352	0.264	112.191
4:00:00 AM	8.272	0.243	101.782
4:15:00 AM	8.145	0.309	126.782
4:30:00 AM	8.058	0.207	83.716
4:45:00 AM	8.048	0.278	112.296
5:00:00 AM	8.117	0.231	94.275
5:15:00 AM	8.198	0.247	102.126
5:30:00 AM	8.287	0.376	157.907
5:45:00 AM	8.337	0.289	122.261
6:00:00 AM	8.454	0.295	127.154
6:15:00 AM	8.659	0.351	156.39
6:30:00 AM	8.779	0.325	147.49
6:45:00 AM	8.924	0.367	170.557
7:00:00 AM	9.088	0.436	207.366
7:15:00 AM	9.096	0.389	185.376
7:30:00 AM	9.232	0.417	202.581
7:45:00 AM	9.289	0.422	206.79
8:00:00 AM	9.331	0.443	218.386
8:15:00 AM	9.387	0.47	233.619
8:30:00 AM	9.47	0.47	236.343
8:45:00 AM	9.555	0.472	240.204
9:00:00 AM	9.661	0.538	277.613
9:15:00 AM	9.687	0.547	283.509
9:30:00 AM	9.614	0.503	258.176
9:45:00 AM	9.643	0.55	283.082
10:00:00 AM	9.763	0.575	300.802
10:15:00 AM	9.804	0.535	281.807
10:30:00 AM	9.868	0.517	274.603
10:45:00 AM	10.08	0.589	321.739
11:00:00 AM	10.119	0.589	323.274
11:15:00 AM	10.227	0.635	353.223
11:30:00 AM	10.232	0.554	308.401
11:45:00 AM	10.226	0.553	307.83

Wednesday - P.M. 11/22/2023

Time	Level	Velocity	Flow
12:00:00 PM	10.311	0.578	324.816
12:15:00 PM	10.331	0.61	343.863
12:30:00 PM	10.268	0.608	340.095
12:45:00 PM	10.352	0.603	340.735
1:00:00 PM	10.368	0.581	329.145
1:15:00 PM	10.403	0.612	348.15
1:30:00 PM	10.531	0.623	360.032
1:45:00 PM	10.675	0.643	378.198
2:00:00 PM	10.681	0.675	397.506
2:15:00 PM	10.708	0.699	413.02
2:30:00 PM	10.73	0.618	366.052
2:45:00 PM	10.663	0.617	362.308
3:00:00 PM	10.625	0.62	362.652
3:15:00 PM	10.713	0.611	361.277
3:30:00 PM	10.842	0.691	414.881
3:45:00 PM	10.832	0.619	371.297
4:00:00 PM	10.748	0.676	401.232
4:15:00 PM	10.8	0.691	412.758
4:30:00 PM	10.822	0.647	387.614
4:45:00 PM	10.815	0.685	410.169
5:00:00 PM	10.734	0.668	395.646
5:15:00 PM	10.73	0.664	393.406
5:30:00 PM	10.718	0.663	392.076
5:45:00 PM	10.791	0.769	459.14
6:00:00 PM	10.946	0.659	400.369
6:15:00 PM	10.886	0.699	421.595
6:30:00 PM	10.936	0.702	426.437
6:45:00 PM	11.114	0.798	494.446
7:00:00 PM	11.075	0.718	442.771
7:15:00 PM	10.852	0.649	390.213
7:30:00 PM	10.822	0.642	384.255
7:45:00 PM	10.758	0.639	379.987
8:00:00 PM	10.859	0.649	390.658
8:15:00 PM	10.974	0.641	390.925
8:30:00 PM	10.966	0.676	411.926
8:45:00 PM	10.881	0.687	414.494
9:00:00 PM	10.867	0.717	432.006
9:15:00 PM	11.069	0.66	407.172
9:30:00 PM	11.029	0.592	363.256
9:45:00 PM	10.818	0.613	367.065
10:00:00 PM	10.728	0.625	370.299
10:15:00 PM	10.696	0.662	390.549
10:30:00 PM	10.685	0.594	349.971
10:45:00 PM	10.516	0.55	317.583
11:00:00 PM	10.429	0.576	328.586
11:15:00 PM	10.385	0.528	299.707
11:30:00 PM	10.28	0.527	295.315
11:45:00 PM	10.19	0.542	300.276

	Inches	Feet/Sec	GPM
Daily Avg:	9.908	0.525	290.265
Daily Min:	8.048	0.207	83.716
Daily Max:	11.114	0.798	494.446
Peak to Avg:			1.70

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**
Location: **MH-7033**
Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**
Time Period: **11/23/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Thursday - A.M. 11/23/2023

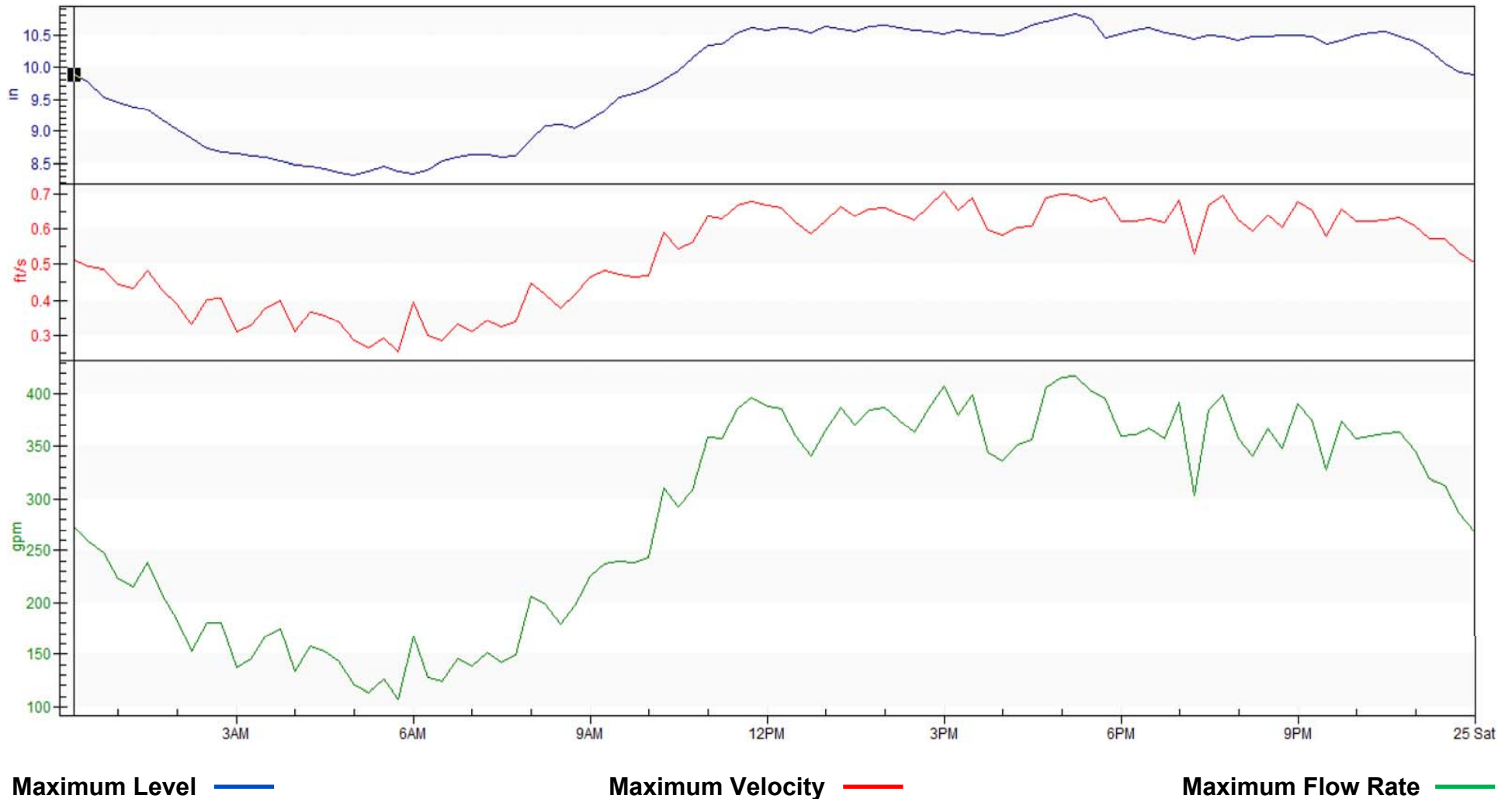
Time	Level	Velocity	Flow
12:00:00 AM	10.277	0.543	304.24
12:15:00 AM	10.239	0.516	287.396
12:30:00 AM	9.985	0.497	267.858
12:45:00 AM	9.775	0.457	239.398
1:00:00 AM	9.548	0.429	218.257
1:15:00 AM	9.41	0.446	222.397
1:30:00 AM	9.408	0.484	241.113
1:45:00 AM	9.385	0.41	203.609
2:00:00 AM	9.315	0.401	197.293
2:15:00 AM	9.241	0.391	190.221
2:30:00 AM	9.018	0.352	165.658
2:45:00 AM	8.836	0.355	162.456
3:00:00 AM	8.726	0.345	155.226
3:15:00 AM	8.643	0.294	130.712
3:30:00 AM	8.574	0.444	195.57
3:45:00 AM	8.548	0.368	161.046
4:00:00 AM	8.506	0.304	132.487
4:15:00 AM	8.395	0.402	171.919
4:30:00 AM	8.297	0.399	167.733
4:45:00 AM	8.262	0.338	141.401
5:00:00 AM	8.297	0.334	140.697
5:15:00 AM	8.265	0.33	138.17
5:30:00 AM	8.196	0.335	138.643
5:45:00 AM	8.147	0.24	98.646
6:00:00 AM	8.171	0.39	160.856
6:15:00 AM	8.216	0.385	160.072
6:30:00 AM	8.214	0.309	128.404
6:45:00 AM	8.228	0.404	168.282
7:00:00 AM	8.41	0.315	134.944
7:15:00 AM	8.593	0.447	197.429
7:30:00 AM	8.731	0.308	138.979
7:45:00 AM	8.779	0.368	167.1
8:00:00 AM	8.809	0.359	163.819
8:15:00 AM	8.966	0.372	173.777
8:30:00 AM	9.063	0.5	236.851
8:45:00 AM	9.166	0.452	217.421
9:00:00 AM	9.503	0.477	240.936
9:15:00 AM	9.973	0.488	262.76
9:30:00 AM	10.459	0.576	330.157
9:45:00 AM	10.68	0.649	381.924
10:00:00 AM	10.848	0.649	389.928
10:15:00 AM	10.834	0.712	427.029
10:30:00 AM	10.974	0.665	405.388
10:45:00 AM	11.123	0.712	441.65
11:00:00 AM	11.213	0.728	456.143
11:15:00 AM	11.227	0.714	448.603
11:30:00 AM	11.456	0.757	487.728
11:45:00 AM	11.573	0.77	502.405

Thursday - P.M. 11/23/2023

Time	Level	Velocity	Flow
12:00:00 PM	11.635	0.794	521.493
12:15:00 PM	11.597	0.828	541.949
12:30:00 PM	11.648	0.835	549.429
12:45:00 PM	11.616	0.733	480.427
1:00:00 PM	11.633	0.825	542.163
1:15:00 PM	11.823	0.78	522.87
1:30:00 PM	11.997	0.835	570.583
1:45:00 PM	12.081	0.895	616.635
2:00:00 PM	11.996	0.732	500.03
2:15:00 PM	11.679	0.741	489.031
2:30:00 PM	11.881	0.859	579.882
2:45:00 PM	11.871	0.865	582.872
3:00:00 PM	11.861	0.852	573.463
3:15:00 PM	11.835	0.779	523.219
3:30:00 PM	11.828	0.758	508.909
3:45:00 PM	11.838	0.918	616.548
4:00:00 PM	11.72	0.84	557.107
4:15:00 PM	11.712	0.774	513.039
4:30:00 PM	11.594	0.828	542.015
4:45:00 PM	11.496	0.777	503.146
5:00:00 PM	11.383	0.868	554.667
5:15:00 PM	11.231	0.719	451.74
5:30:00 PM	11.156	0.774	481.92
5:45:00 PM	11.018	0.67	410.532
6:00:00 PM	10.892	0.674	407.242
6:15:00 PM	10.638	0.612	358.617
6:30:00 PM	10.449	0.6	343.434
6:45:00 PM	10.359	0.585	331.222
7:00:00 PM	10.185	0.612	338.546
7:15:00 PM	10.027	0.53	287.104
7:30:00 PM	10.051	0.556	302.618
7:45:00 PM	9.972	0.515	277.084
8:00:00 PM	9.808	0.441	232.024
8:15:00 PM	9.623	0.457	234.678
8:30:00 PM	9.583	0.477	243.77
8:45:00 PM	9.532	0.464	235.39
9:00:00 PM	9.502	0.486	245.401
9:15:00 PM	9.491	0.462	232.713
9:30:00 PM	9.56	0.463	235.718
9:45:00 PM	9.638	0.467	240.274
10:00:00 PM	9.614	0.463	237.227
10:15:00 PM	9.709	0.554	287.857
10:30:00 PM	9.806	0.5	263.042
10:45:00 PM	9.818	0.582	306.654
11:00:00 PM	9.797	0.537	282.194
11:15:00 PM	9.701	0.453	235.059
11:30:00 PM	9.729	0.481	250.772
11:45:00 PM	9.892	0.502	267.187

	Inches	Feet/Sec	GPM
Daily Avg:	10.060	0.559	320.000
Daily Min:	8.147	0.24	98.646
Daily Max:	12.081	0.918	616.635
Peak to Avg:			1.93

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **11/24/2023, 12:00 a.m. - 12:00 p.m.**

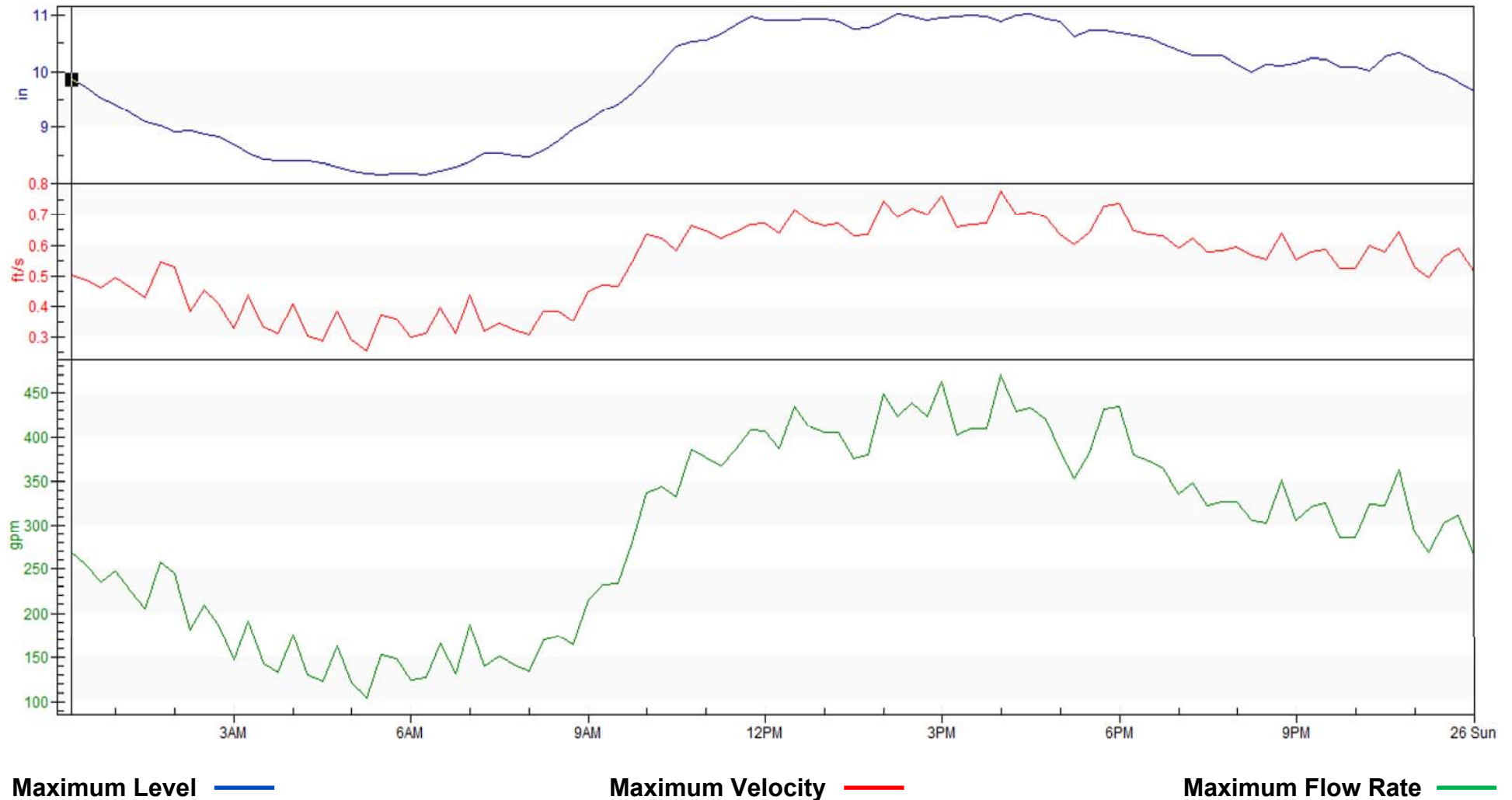
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Friday - A.M. 11/24/2023

Friday - P.M. 11/24/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	9.951	0.522	280.353	12:00:00 PM	10.582	0.668	388.705
12:15:00 AM	9.888	0.513	273.307	12:15:00 PM	10.606	0.661	385.82
12:30:00 AM	9.768	0.493	258.458	12:30:00 PM	10.593	0.618	359.858
12:45:00 AM	9.539	0.488	247.868	12:45:00 PM	10.543	0.588	340.521
1:00:00 AM	9.456	0.443	222.19	1:00:00 PM	10.623	0.623	364.171
1:15:00 AM	9.377	0.435	215.696	1:15:00 PM	10.589	0.666	387.633
1:30:00 AM	9.336	0.483	238.021	1:30:00 PM	10.563	0.638	370.142
1:45:00 AM	9.172	0.431	207.814	1:45:00 PM	10.641	0.656	384.42
2:00:00 AM	9.03	0.387	182.742	2:00:00 PM	10.654	0.66	387.246
2:15:00 AM	8.888	0.332	153.493	2:15:00 PM	10.606	0.644	375.658
2:30:00 AM	8.734	0.402	181.155	2:30:00 PM	10.567	0.627	363.847
2:45:00 AM	8.675	0.404	180.546	2:45:00 PM	10.55	0.666	385.761
3:00:00 AM	8.652	0.308	137.207	3:00:00 PM	10.516	0.707	408.184
3:15:00 AM	8.614	0.329	145.762	3:15:00 PM	10.572	0.654	379.733
3:30:00 AM	8.59	0.379	167.124	3:30:00 PM	10.539	0.689	398.775
3:45:00 AM	8.524	0.399	174.351	3:45:00 PM	10.513	0.597	344.081
4:00:00 AM	8.475	0.31	134.248	4:00:00 PM	10.502	0.582	335.178
4:15:00 AM	8.455	0.366	157.891	4:15:00 PM	10.554	0.606	351.296
4:30:00 AM	8.412	0.357	153.12	4:30:00 PM	10.649	0.607	355.937
4:45:00 AM	8.349	0.338	143.458	4:45:00 PM	10.707	0.689	406.732
5:00:00 AM	8.314	0.286	120.744	5:00:00 PM	10.762	0.7	416.197
5:15:00 AM	8.376	0.265	113.09	5:15:00 PM	10.83	0.696	416.959
5:30:00 AM	8.457	0.292	126.256	5:30:00 PM	10.751	0.678	402.671
5:45:00 AM	8.376	0.253	107.712	5:45:00 PM	10.465	0.69	395.834
6:00:00 AM	8.337	0.396	167.63	6:00:00 PM	10.509	0.623	359.19
6:15:00 AM	8.39	0.3	128.018	6:15:00 PM	10.573	0.621	360.815
6:30:00 AM	8.53	0.284	123.98	6:30:00 PM	10.62	0.628	367.3
6:45:00 AM	8.581	0.33	145.243	6:45:00 PM	10.539	0.617	356.982
7:00:00 AM	8.639	0.31	137.963	7:00:00 PM	10.494	0.681	391.719
7:15:00 AM	8.628	0.343	152.119	7:15:00 PM	10.443	0.53	303.263
7:30:00 AM	8.582	0.323	142.202	7:30:00 PM	10.493	0.669	384.671
7:45:00 AM	8.602	0.338	149.439	7:45:00 PM	10.481	0.696	399.637
8:00:00 AM	8.864	0.448	206.255	8:00:00 PM	10.417	0.627	357.264
8:15:00 AM	9.077	0.418	198.422	8:15:00 PM	10.473	0.592	340.007
8:30:00 AM	9.105	0.377	179.971	8:30:00 PM	10.472	0.64	367.207
8:45:00 AM	9.033	0.417	197.059	8:45:00 PM	10.494	0.604	347.469
9:00:00 AM	9.189	0.466	225.026	9:00:00 PM	10.493	0.679	390.619
9:15:00 AM	9.318	0.483	237.406	9:15:00 PM	10.466	0.655	375.607
9:30:00 AM	9.527	0.472	239.307	9:30:00 PM	10.361	0.578	327.404
9:45:00 AM	9.589	0.465	237.857	9:45:00 PM	10.407	0.657	374.01
10:00:00 AM	9.664	0.471	243.27	10:00:00 PM	10.488	0.621	356.911
10:15:00 AM	9.802	0.59	310.479	10:15:00 PM	10.525	0.623	359.728
10:30:00 AM	9.942	0.545	292.051	10:30:00 PM	10.556	0.624	361.785
10:45:00 AM	10.139	0.56	308.095	10:45:00 PM	10.477	0.632	363.047
11:00:00 AM	10.333	0.636	358.615	11:00:00 PM	10.387	0.609	345.628
11:15:00 AM	10.362	0.63	356.766	11:15:00 PM	10.256	0.572	319.387
11:30:00 AM	10.528	0.668	386.242	11:30:00 PM	10.067	0.573	312.466
11:45:00 AM	10.612	0.679	396.612	11:45:00 PM	9.932	0.535	286.339
				Inches	Feet/Sec	GPM	
Daily Avg:				9.808	0.528	286.064	
Daily Min:				8.314	0.253	107.712	
Daily Max:				10.83	0.707	416.959	
Peak to Avg:						1.46	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **11/25/2023, 12:00 a.m. - 12:00 p.m.**

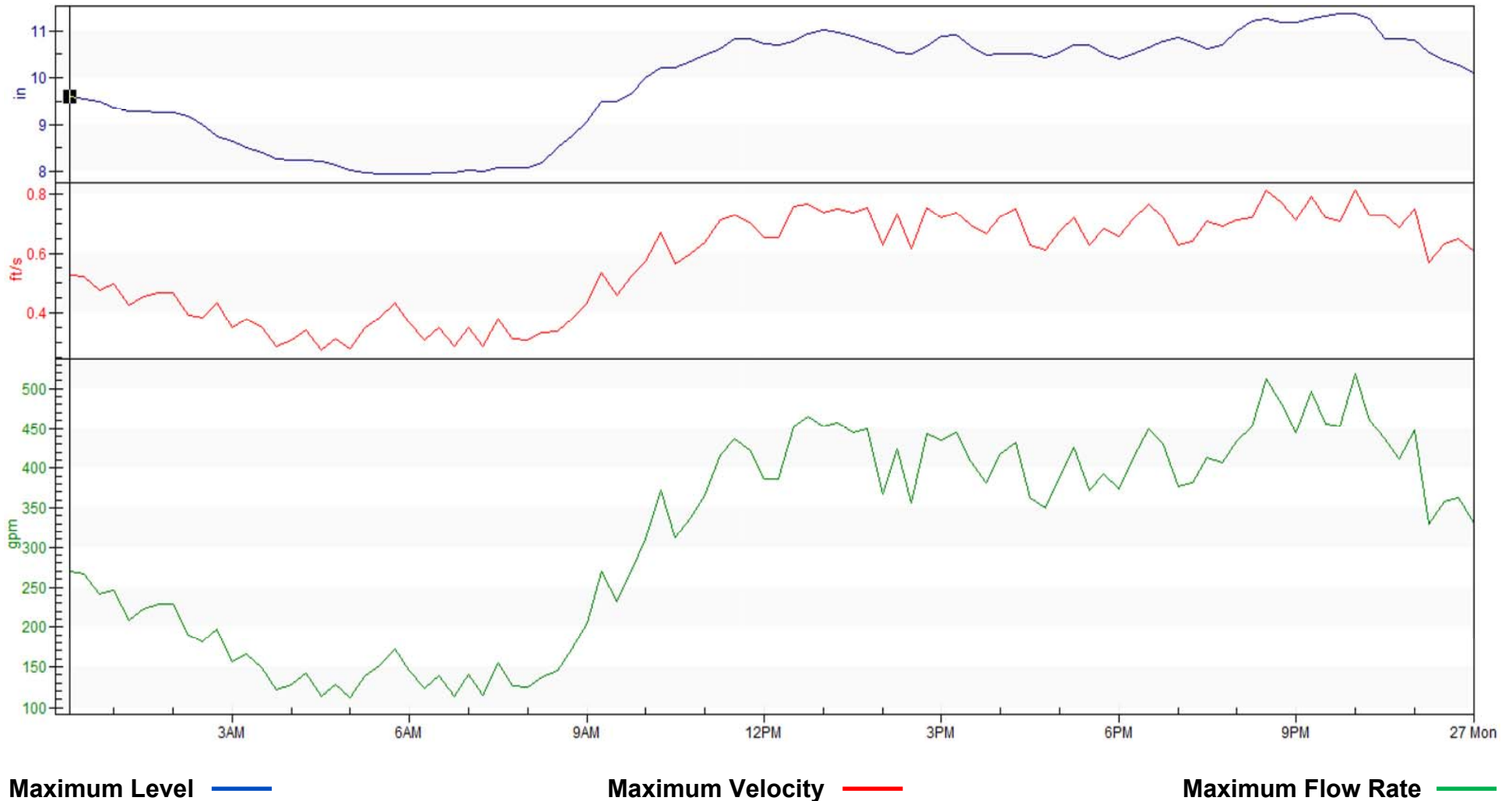
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Saturday - A.M. 11/25/2023

Saturday - P.M. 11/25/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	9.885	0.504	268.276	12:00:00 PM	10.904	0.672	406.641
12:15:00 AM	9.868	0.505	268.33	12:15:00 PM	10.91	0.639	386.52
12:30:00 AM	9.723	0.489	254.492	12:30:00 PM	10.909	0.718	434.384
12:45:00 AM	9.517	0.464	234.643	12:45:00 PM	10.937	0.679	411.965
1:00:00 AM	9.401	0.496	246.988	1:00:00 PM	10.946	0.666	404.519
1:15:00 AM	9.257	0.462	225.348	1:15:00 PM	10.889	0.671	404.942
1:30:00 AM	9.1	0.429	204.622	1:30:00 PM	10.764	0.631	375.551
1:45:00 AM	9.023	0.546	257.51	1:45:00 PM	10.783	0.636	378.978
2:00:00 AM	8.919	0.529	245.296	2:00:00 PM	10.885	0.745	449.308
2:15:00 AM	8.95	0.387	180.253	2:15:00 PM	11.026	0.691	423.654
2:30:00 AM	8.883	0.453	209.077	2:30:00 PM	10.98	0.72	439.629
2:45:00 AM	8.817	0.41	187.15	2:45:00 PM	10.905	0.701	423.83
3:00:00 AM	8.691	0.327	146.603	3:00:00 PM	10.955	0.76	462.587
3:15:00 AM	8.526	0.438	191.478	3:15:00 PM	10.983	0.658	401.637
3:30:00 AM	8.415	0.332	142.5	3:30:00 PM	10.995	0.669	409.198
3:45:00 AM	8.398	0.31	132.71	3:45:00 PM	10.991	0.67	409.488
4:00:00 AM	8.41	0.409	175.237	4:00:00 PM	10.884	0.779	469.792
4:15:00 AM	8.396	0.303	129.694	4:15:00 PM	11.006	0.7	428.525
4:30:00 AM	8.357	0.288	122.333	4:30:00 PM	11.029	0.707	433.81
4:45:00 AM	8.284	0.386	162.184	4:45:00 PM	10.93	0.694	420.724
5:00:00 AM	8.23	0.293	121.902	5:00:00 PM	10.895	0.636	384.024
5:15:00 AM	8.176	0.254	104.767	5:15:00 PM	10.622	0.604	352.853
5:30:00 AM	8.156	0.371	152.604	5:30:00 PM	10.73	0.645	381.791
5:45:00 AM	8.187	0.36	148.621	5:45:00 PM	10.745	0.728	432.045
6:00:00 AM	8.188	0.3	124.124	6:00:00 PM	10.694	0.737	434.588
6:15:00 AM	8.153	0.31	127.544	6:15:00 PM	10.649	0.648	379.908
6:30:00 AM	8.229	0.399	165.958	6:30:00 PM	10.61	0.637	371.812
6:45:00 AM	8.285	0.311	130.531	6:45:00 PM	10.496	0.631	363.308
7:00:00 AM	8.376	0.437	186.188	7:00:00 PM	10.373	0.591	334.878
7:15:00 AM	8.526	0.321	140.177	7:15:00 PM	10.292	0.621	348.273
7:30:00 AM	8.526	0.345	150.779	7:30:00 PM	10.295	0.576	323.136
7:45:00 AM	8.492	0.324	140.78	7:45:00 PM	10.277	0.584	326.81
8:00:00 AM	8.473	0.309	133.705	8:00:00 PM	10.135	0.596	327.483
8:15:00 AM	8.575	0.384	168.942	8:15:00 PM	9.996	0.565	305.096
8:30:00 AM	8.768	0.385	174.456	8:30:00 PM	10.138	0.551	303.252
8:45:00 AM	8.962	0.352	164.248	8:45:00 PM	10.113	0.641	351.505
9:00:00 AM	9.118	0.45	215.005	9:00:00 PM	10.144	0.555	305.595
9:15:00 AM	9.29	0.473	231.806	9:15:00 PM	10.234	0.576	321.043
9:30:00 AM	9.403	0.469	233.336	9:30:00 PM	10.227	0.584	325
9:45:00 AM	9.614	0.546	279.822	9:45:00 PM	10.09	0.524	286.524
10:00:00 AM	9.869	0.634	336.576	10:00:00 PM	10.075	0.523	285.281
10:15:00 AM	10.185	0.622	344.17	10:15:00 PM	10.022	0.598	324.081
10:30:00 AM	10.453	0.582	333.162	10:30:00 PM	10.256	0.577	322.39
10:45:00 AM	10.544	0.666	385.445	10:45:00 PM	10.325	0.643	362.417
11:00:00 AM	10.567	0.649	376.837	11:00:00 PM	10.21	0.528	293.075
11:15:00 AM	10.673	0.624	366.956	11:15:00 PM	10.031	0.496	269.216
11:30:00 AM	10.835	0.642	385.084	11:30:00 PM	9.954	0.563	302.314
11:45:00 AM	10.974	0.668	407.552	11:45:00 PM	9.805	0.591	311
				Inches	Feet/Sec	GPM	
Daily Avg:				9.808	0.537	292.125	
Daily Min:				8.153	0.254	104.767	
Daily Max:				11.029	0.779	469.792	
Peak to Avg:						1.61	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **11/26/2023, 12:00 a.m. - 12:00 p.m.**

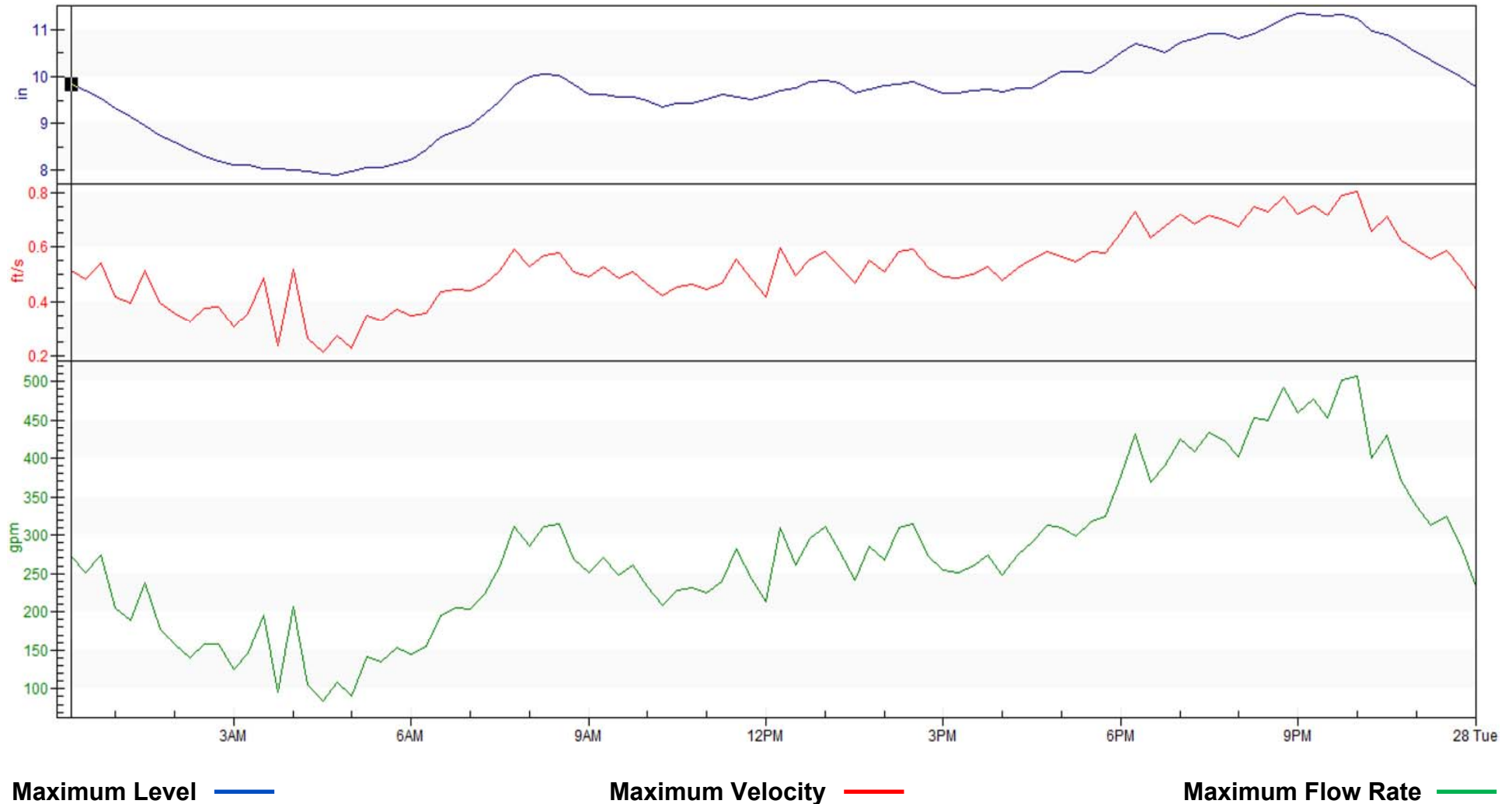
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Sunday - A.M. 11/26/2023

Sunday - P.M. 11/26/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	9.651	0.515	265.337	12:00:00 PM	10.729	0.653	386.697
12:15:00 AM	9.613	0.525	269.229	12:15:00 PM	10.694	0.654	385.726
12:30:00 AM	9.557	0.522	265.862	12:30:00 PM	10.783	0.758	451.889
12:45:00 AM	9.503	0.477	241.155	12:45:00 PM	10.946	0.765	465.216
1:00:00 AM	9.356	0.498	246.259	1:00:00 PM	11.025	0.737	452.138
1:15:00 AM	9.286	0.426	208.399	1:15:00 PM	10.966	0.752	457.897
1:30:00 AM	9.297	0.455	223.047	1:30:00 PM	10.89	0.736	444.183
1:45:00 AM	9.262	0.468	228.223	1:45:00 PM	10.778	0.753	448.638
2:00:00 AM	9.254	0.468	228.148	2:00:00 PM	10.664	0.626	367.851
2:15:00 AM	9.183	0.393	189.821	2:15:00 PM	10.549	0.733	424.659
2:30:00 AM	8.994	0.385	180.782	2:30:00 PM	10.508	0.617	355.569
2:45:00 AM	8.751	0.436	197.063	2:45:00 PM	10.664	0.754	442.976
3:00:00 AM	8.634	0.35	155.576	3:00:00 PM	10.879	0.722	435.516
3:15:00 AM	8.521	0.379	165.295	3:15:00 PM	10.898	0.737	445.237
3:30:00 AM	8.4	0.347	148.7	3:30:00 PM	10.67	0.696	409.082
3:45:00 AM	8.279	0.288	120.971	3:45:00 PM	10.478	0.663	381.025
4:00:00 AM	8.233	0.308	128.211	4:00:00 PM	10.507	0.724	417.345
4:15:00 AM	8.246	0.342	142.829	4:15:00 PM	10.512	0.748	431.563
4:30:00 AM	8.229	0.273	113.745	4:30:00 PM	10.5	0.629	362.479
4:45:00 AM	8.149	0.313	128.463	4:45:00 PM	10.442	0.611	349.596
5:00:00 AM	8.042	0.28	112.799	5:00:00 PM	10.525	0.672	388.313
5:15:00 AM	7.97	0.351	139.716	5:15:00 PM	10.703	0.721	425.442
5:30:00 AM	7.956	0.383	152.102	5:30:00 PM	10.707	0.629	371.635
5:45:00 AM	7.948	0.435	172.818	5:45:00 PM	10.498	0.682	392.69
6:00:00 AM	7.962	0.365	145.076	6:00:00 PM	10.415	0.656	373.566
6:15:00 AM	7.949	0.309	122.694	6:15:00 PM	10.522	0.714	412.528
6:30:00 AM	7.975	0.348	138.634	6:30:00 PM	10.656	0.766	449.744
6:45:00 AM	7.98	0.284	113.462	6:45:00 PM	10.785	0.72	429.598
7:00:00 AM	8.018	0.349	140.383	7:00:00 PM	10.871	0.626	376.817
7:15:00 AM	7.993	0.287	114.962	7:15:00 PM	10.763	0.641	381.438
7:30:00 AM	8.085	0.381	154.699	7:30:00 PM	10.61	0.707	412.586
7:45:00 AM	8.085	0.313	127.044	7:45:00 PM	10.702	0.689	406.539
8:00:00 AM	8.092	0.307	125.025	8:00:00 PM	10.994	0.71	434.254
8:15:00 AM	8.192	0.332	137.184	8:15:00 PM	11.205	0.722	451.939
8:30:00 AM	8.512	0.335	146.043	8:30:00 PM	11.248	0.813	511.799
8:45:00 AM	8.754	0.38	171.778	8:45:00 PM	11.179	0.769	480.524
9:00:00 AM	9.083	0.433	205.663	9:00:00 PM	11.173	0.713	445.153
9:15:00 AM	9.489	0.536	270.067	9:15:00 PM	11.25	0.79	497.223
9:30:00 AM	9.485	0.461	232.226	9:30:00 PM	11.304	0.72	455.905
9:45:00 AM	9.663	0.524	270.452	9:45:00 PM	11.367	0.708	451.657
10:00:00 AM	9.994	0.574	310.035	10:00:00 PM	11.353	0.813	517.99
10:15:00 AM	10.226	0.668	371.639	10:15:00 PM	11.264	0.731	460.74
10:30:00 AM	10.205	0.563	312.431	10:30:00 PM	10.818	0.73	436.907
10:45:00 AM	10.354	0.596	337.068	10:45:00 PM	10.827	0.687	411.958
11:00:00 AM	10.475	0.638	366.254	11:00:00 PM	10.796	0.75	447.694
11:15:00 AM	10.619	0.713	416.666	11:15:00 PM	10.55	0.57	330.24
11:30:00 AM	10.838	0.727	436.15	11:30:00 PM	10.368	0.633	358.544
11:45:00 AM	10.818	0.705	422.018	11:45:00 PM	10.273	0.647	362.001
				Inches Feet/Sec GPM			
				Daily Avg: 9.866 0.569 315.132			
				Daily Min: 7.948 0.273 112.799			
				Daily Max: 11.367 0.813 517.99			
				Peak to Avg: 1.64			

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **11/27/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Monday - A.M. 11/27/2023

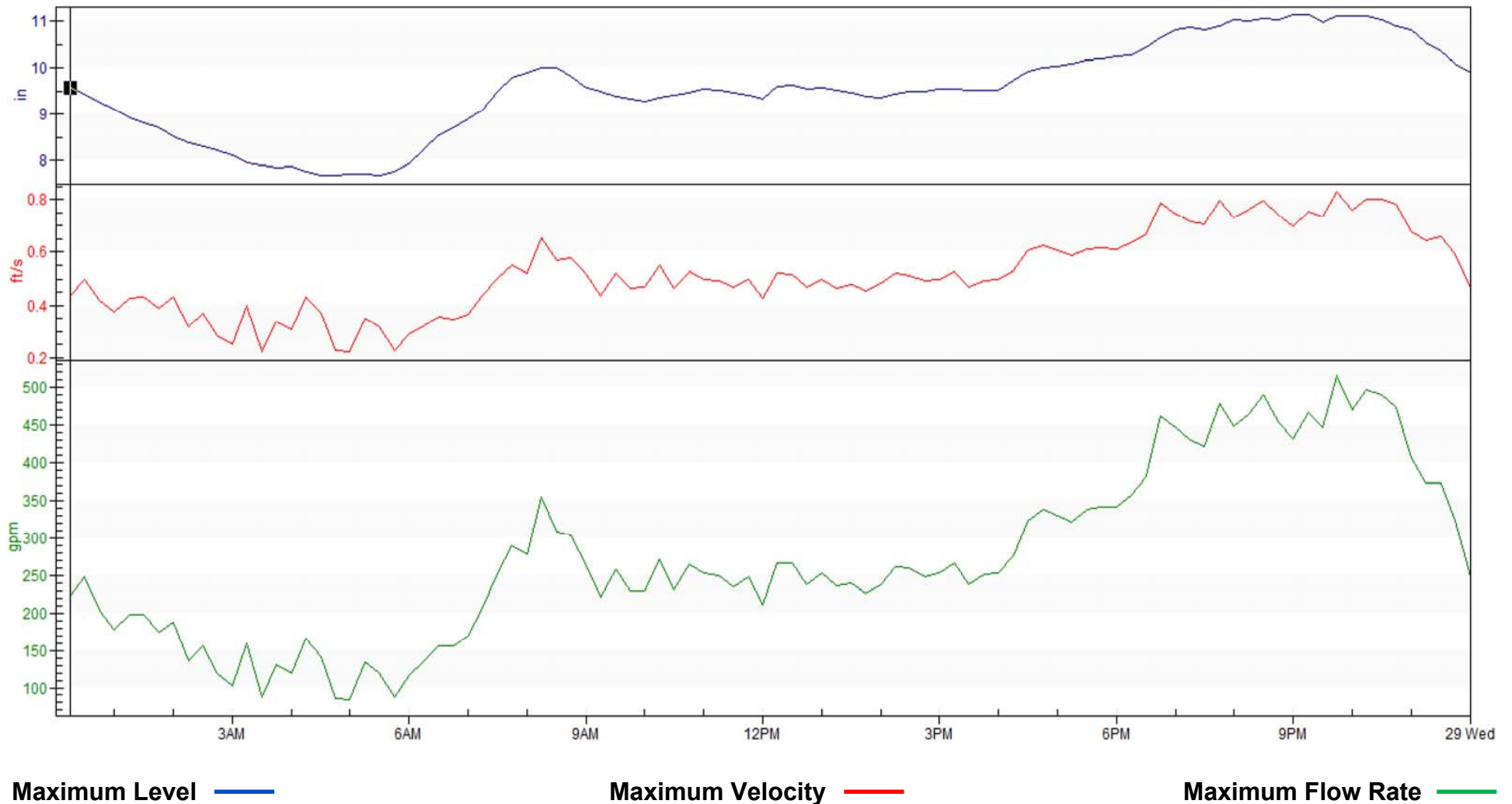
Time	Level	Velocity	Velocity
12:10:00 AM	10.102	0.605	331.465
12:15:00 AM	9.829	0.516	272.653
12:30:00 AM	9.714	0.483	251.382
12:45:00 AM	9.533	0.542	274.786
1:00:00 AM	9.321	0.417	205.277
1:15:00 AM	9.146	0.393	188.719
1:30:00 AM	8.941	0.512	238.481
1:45:00 AM	8.748	0.394	177.966
2:00:00 AM	8.605	0.357	157.957
2:15:00 AM	8.454	0.325	140.498
2:30:00 AM	8.295	0.376	158.138
2:45:00 AM	8.203	0.38	157.634
3:00:00 AM	8.132	0.305	125.037
3:15:00 AM	8.122	0.356	145.595
3:30:00 AM	8.045	0.485	195.712
3:45:00 AM	8.046	0.236	95.09
4:00:00 AM	8.001	0.517	207.012
4:15:00 AM	7.974	0.266	105.959
4:30:00 AM	7.932	0.214	84.714
4:45:00 AM	7.902	0.275	108.258
5:00:00 AM	7.989	0.228	91.254
5:15:00 AM	8.065	0.348	140.73
5:30:00 AM	8.076	0.331	134.196
5:45:00 AM	8.135	0.372	152.53
6:00:00 AM	8.229	0.346	143.964
6:15:00 AM	8.444	0.357	153.961
6:30:00 AM	8.712	0.436	195.865
6:45:00 AM	8.85	0.446	204.904
7:00:00 AM	8.948	0.438	204.113
7:15:00 AM	9.196	0.462	223.472
7:30:00 AM	9.484	0.516	260.045
7:45:00 AM	9.803	0.592	311.723
8:00:00 AM	9.988	0.528	285.068
8:15:00 AM	10.059	0.571	310.978
8:30:00 AM	10.029	0.58	314.418
8:45:00 AM	9.841	0.509	269.17
9:00:00 AM	9.622	0.49	251.392
9:15:00 AM	9.613	0.528	270.823
9:30:00 AM	9.563	0.487	247.855
9:45:00 AM	9.566	0.511	260.265
10:00:00 AM	9.48	0.462	232.753
10:15:00 AM	9.363	0.421	208.279
10:30:00 AM	9.426	0.456	227.686
10:45:00 AM	9.428	0.465	232.247
11:00:00 AM	9.506	0.444	224.326
11:15:00 AM	9.611	0.468	239.853
11:30:00 AM	9.571	0.553	282.191
11:45:00 AM	9.524	0.48	243.1

Monday - P.M. 11/27/2023

Time	Level	Velocity	Flow
12:00:00 PM	9.609	0.416	213.127
12:15:00 PM	9.704	0.598	310.267
12:30:00 PM	9.765	0.498	260.616
12:45:00 PM	9.894	0.554	295.132
1:00:00 PM	9.917	0.583	311.79
1:15:00 PM	9.877	0.526	279.659
1:30:00 PM	9.657	0.468	241.23
1:45:00 PM	9.719	0.55	286.045
2:00:00 PM	9.801	0.51	268.242
2:15:00 PM	9.845	0.584	309.312
2:30:00 PM	9.88	0.593	315.391
2:45:00 PM	9.747	0.523	273.234
3:00:00 PM	9.652	0.493	254.149
3:15:00 PM	9.658	0.486	250.944
3:30:00 PM	9.715	0.498	258.999
3:45:00 PM	9.723	0.527	274.344
4:00:00 PM	9.684	0.478	247.714
4:15:00 PM	9.757	0.524	274.2
4:30:00 PM	9.761	0.556	290.755
4:45:00 PM	9.957	0.583	313.375
5:00:00 PM	10.114	0.567	310.706
5:15:00 PM	10.112	0.545	298.619
5:30:00 PM	10.074	0.582	317.75
5:45:00 PM	10.274	0.58	324.775
6:00:00 PM	10.519	0.654	377.529
6:15:00 PM	10.692	0.731	431.116
6:30:00 PM	10.628	0.632	369.746
6:45:00 PM	10.509	0.676	389.787
7:00:00 PM	10.714	0.72	425.534
7:15:00 PM	10.793	0.684	408.317
7:30:00 PM	10.907	0.717	433.681
7:45:00 PM	10.907	0.698	422.579
8:00:00 PM	10.797	0.673	402.008
8:15:00 PM	10.908	0.749	452.969
8:30:00 PM	11.048	0.731	449.59
8:45:00 PM	11.224	0.784	492.033
9:00:00 PM	11.343	0.723	459.892
9:15:00 PM	11.316	0.752	477.215
9:30:00 PM	11.281	0.715	451.784
9:45:00 PM	11.327	0.789	501.34
10:00:00 PM	11.239	0.805	506.01
10:15:00 PM	10.968	0.658	400.956
10:30:00 PM	10.875	0.713	429.515
10:45:00 PM	10.727	0.626	370.825
11:00:00 PM	10.514	0.587	338.526
11:15:00 PM	10.341	0.556	313.872
11:30:00 PM	10.15	0.589	324.743
11:45:00 PM	10.004	0.53	286.467

	Inches	Feet/Sec	GPM
Daily Avg:	9.649	0.521	276.889
Daily Min:	7.902	0.214	84.714
Daily Max:	11.343	0.805	506.01
Peak to Avg:			1.83

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**
Location: **MH-7033**
Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**
Time Period: **11/28/2023, 12:00 a.m. - 12:00 p.m.**

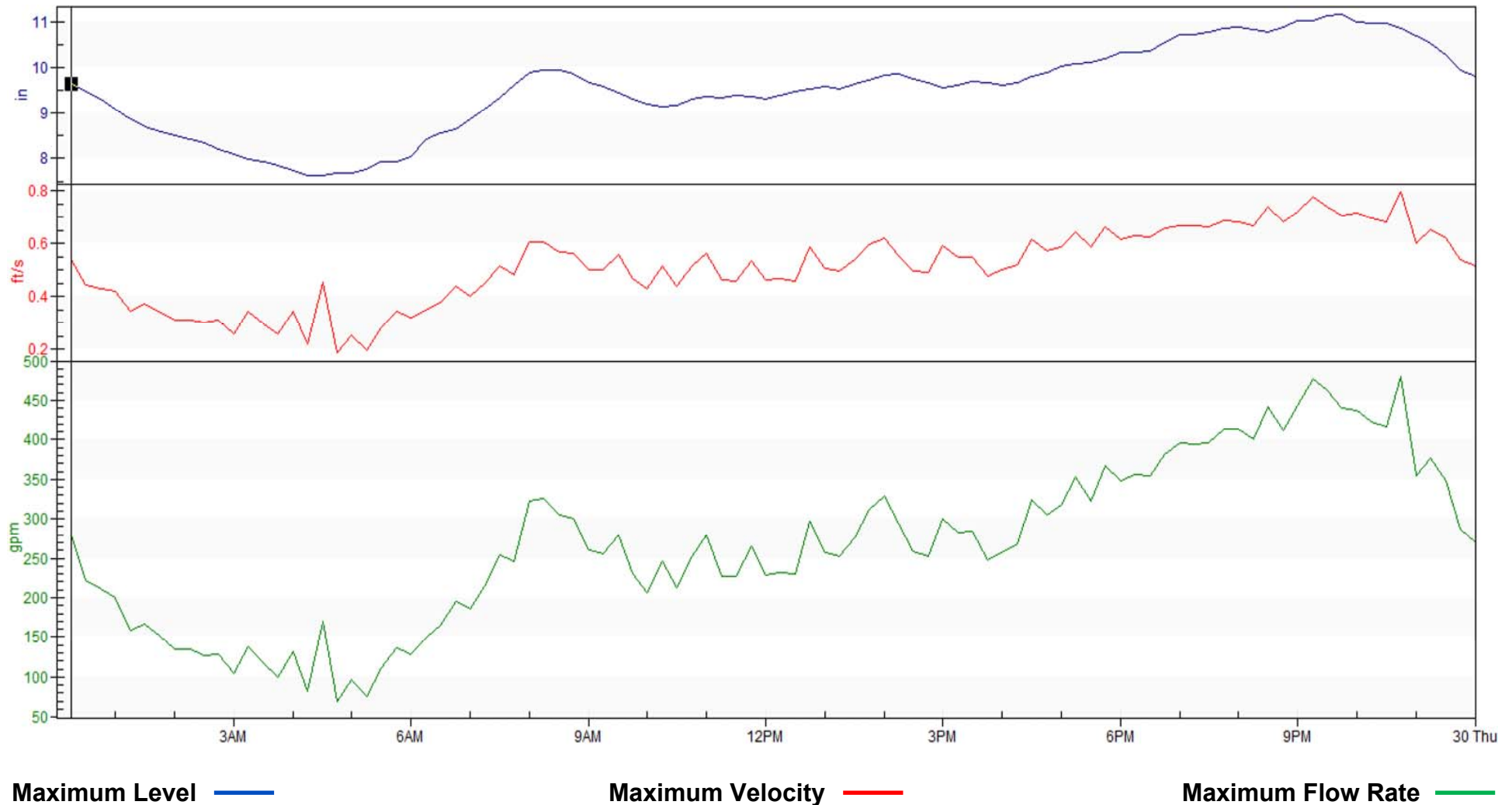
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Tuesday- A.M. 11/28/2023

Tuesday- P.M. 11/28/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	9.784	0.445	233.739	12:00:00 PM	9.33	0.428	211.171
12:15:00 AM	9.567	0.438	223.007	12:15:00 PM	9.596	0.52	265.829
12:30:00 AM	9.428	0.497	248.238	12:30:00 PM	9.637	0.516	265.636
12:45:00 AM	9.246	0.415	202.312	12:45:00 PM	9.554	0.469	238.573
1:00:00 AM	9.103	0.374	178.245	1:00:00 PM	9.568	0.496	252.639
1:15:00 AM	8.938	0.426	198.019	1:15:00 PM	9.525	0.466	235.965
1:30:00 AM	8.83	0.432	197.876	1:30:00 PM	9.459	0.478	240.074
1:45:00 AM	8.697	0.389	174.449	1:45:00 PM	9.384	0.457	226.808
2:00:00 AM	8.517	0.429	187.286	2:00:00 PM	9.368	0.481	238.59
2:15:00 AM	8.375	0.318	135.475	2:15:00 PM	9.442	0.523	261.79
2:30:00 AM	8.314	0.371	156.543	2:30:00 PM	9.494	0.515	259.535
2:45:00 AM	8.231	0.286	119.109	2:45:00 PM	9.495	0.493	248.721
3:00:00 AM	8.122	0.25	102.341	3:00:00 PM	9.553	0.499	253.554
3:15:00 AM	7.957	0.399	158.647	3:15:00 PM	9.536	0.524	266.106
3:30:00 AM	7.896	0.223	87.829	3:30:00 PM	9.511	0.471	238.136
3:45:00 AM	7.856	0.335	130.965	3:45:00 PM	9.52	0.495	250.8
4:00:00 AM	7.863	0.306	119.789	4:00:00 PM	9.527	0.499	252.769
4:15:00 AM	7.768	0.431	165.805	4:15:00 PM	9.733	0.531	276.649
4:30:00 AM	7.687	0.371	140.654	4:30:00 PM	9.93	0.605	324.055
4:45:00 AM	7.682	0.226	85.684	4:45:00 PM	10.016	0.624	337.961
5:00:00 AM	7.701	0.223	84.735	5:00:00 PM	10.048	0.606	329.343
5:15:00 AM	7.71	0.351	133.826	5:15:00 PM	10.079	0.59	322.283
5:30:00 AM	7.68	0.317	120.069	5:30:00 PM	10.167	0.613	338.247
5:45:00 AM	7.752	0.229	88.032	5:45:00 PM	10.184	0.618	341.992
6:00:00 AM	7.918	0.291	115.114	6:00:00 PM	10.255	0.613	342.057
6:15:00 AM	8.239	0.324	135.145	6:15:00 PM	10.286	0.637	357.398
6:30:00 AM	8.55	0.355	155.823	6:30:00 PM	10.437	0.667	381.196
6:45:00 AM	8.711	0.349	156.803	6:45:00 PM	10.654	0.788	462.24
7:00:00 AM	8.888	0.367	169.589	7:00:00 PM	10.83	0.746	447.504
7:15:00 AM	9.09	0.434	206.809	7:15:00 PM	10.862	0.716	431.092
7:30:00 AM	9.481	0.504	253.742	7:30:00 PM	10.812	0.706	422.179
7:45:00 AM	9.802	0.549	289.071	7:45:00 PM	10.893	0.794	479.659
8:00:00 AM	9.889	0.522	277.774	8:00:00 PM	11.038	0.73	448.793
8:15:00 AM	10.01	0.656	354.645	8:15:00 PM	10.995	0.761	465.262
8:30:00 AM	10.016	0.568	307.421	8:30:00 PM	11.067	0.795	489.809
8:45:00 AM	9.813	0.577	303.851	8:45:00 PM	11.044	0.738	453.826
9:00:00 AM	9.58	0.517	263.732	9:00:00 PM	11.146	0.695	432.294
9:15:00 AM	9.495	0.437	220.698	9:15:00 PM	11.14	0.752	467.613
9:30:00 AM	9.382	0.52	258.043	9:30:00 PM	10.971	0.733	446.731
9:45:00 AM	9.332	0.467	229.995	9:45:00 PM	11.123	0.83	515.035
10:00:00 AM	9.274	0.469	229.266	10:00:00 PM	11.107	0.759	470.017
10:15:00 AM	9.372	0.549	272.275	10:15:00 PM	11.118	0.803	497.983
10:30:00 AM	9.404	0.466	231.914	10:30:00 PM	11.027	0.8	491.099
10:45:00 AM	9.474	0.527	265.101	10:45:00 PM	10.889	0.784	473.091
11:00:00 AM	9.55	0.497	252.677	11:00:00 PM	10.83	0.677	406.145
11:15:00 AM	9.531	0.492	249.514	11:15:00 PM	10.551	0.646	374.129
11:30:00 AM	9.457	0.468	235.017	11:30:00 PM	10.363	0.661	374.024
11:45:00 AM	9.408	0.498	247.94	11:45:00 PM	10.077	0.594	324.021
				Inches	Feet/Sec	GPM	
Daily Avg:				9.534	0.520	274.224	
Daily Min:				7.68	0.223	84.735	
Daily Max:				11.146	0.83	515.035	
Peak to Avg:						1.88	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **11/29/2023, 12:00 a.m. - 12:00 p.m.**

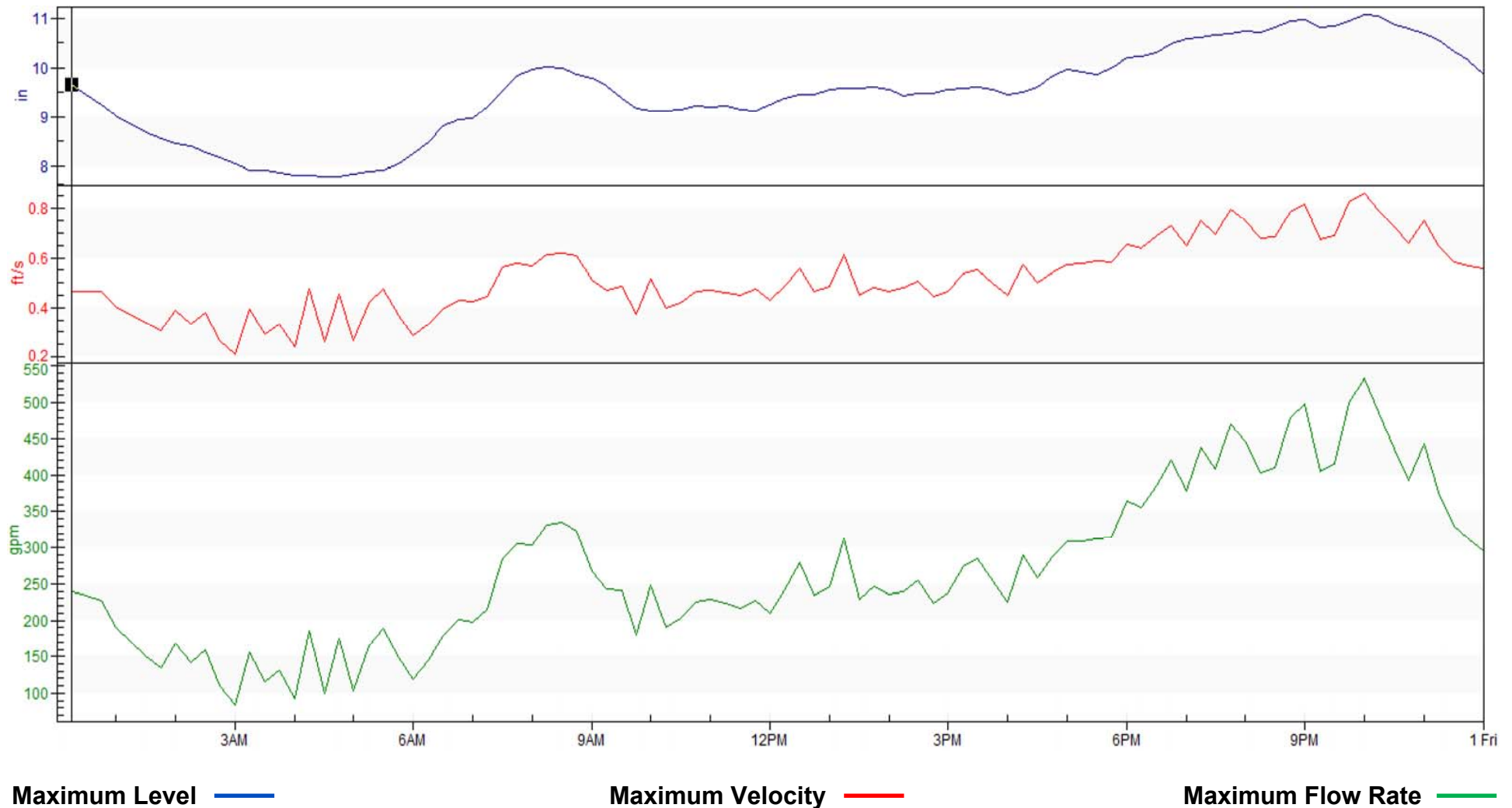
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Wednesday - A.M. 11/29/2023

Wednesday - P.M. 11/29/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	9.891	0.466	248.26	12:00:00 PM	9.307	0.465	228.543
12:15:00 AM	9.654	0.541	278.949	12:15:00 PM	9.398	0.467	232.398
12:30:00 AM	9.469	0.443	222.662	12:30:00 PM	9.475	0.457	229.795
12:45:00 AM	9.303	0.432	211.925	12:45:00 PM	9.525	0.587	297.37
1:00:00 AM	9.1	0.42	200.348	1:00:00 PM	9.587	0.504	257.502
1:15:00 AM	8.874	0.345	158.779	1:15:00 PM	9.544	0.496	252.126
1:30:00 AM	8.692	0.373	167.045	1:30:00 PM	9.655	0.537	277.229
1:45:00 AM	8.597	0.34	150.187	1:45:00 PM	9.733	0.597	311.46
2:00:00 AM	8.509	0.308	134.291	2:00:00 PM	9.832	0.622	328.534
2:15:00 AM	8.428	0.312	134.119	2:15:00 PM	9.867	0.552	293.232
2:30:00 AM	8.335	0.298	126.259	2:30:00 PM	9.754	0.495	258.674
2:45:00 AM	8.195	0.312	128.937	2:45:00 PM	9.667	0.49	253.089
3:00:00 AM	8.088	0.257	104.346	3:00:00 PM	9.561	0.59	300.152
3:15:00 AM	7.975	0.345	137.414	3:15:00 PM	9.625	0.55	282.577
3:30:00 AM	7.933	0.295	116.893	3:30:00 PM	9.709	0.548	284.89
3:45:00 AM	7.859	0.256	100.167	3:45:00 PM	9.677	0.479	247.766
4:00:00 AM	7.746	0.342	131.036	4:00:00 PM	9.609	0.503	257.954
4:15:00 AM	7.63	0.219	82.286	4:15:00 PM	9.679	0.519	268.369
4:30:00 AM	7.623	0.453	169.797	4:30:00 PM	9.817	0.613	323.466
4:45:00 AM	7.674	0.185	70.078	4:45:00 PM	9.902	0.571	304.706
5:00:00 AM	7.688	0.253	95.903	5:00:00 PM	10.026	0.587	317.992
5:15:00 AM	7.763	0.197	75.665	5:15:00 PM	10.097	0.644	352.232
5:30:00 AM	7.917	0.282	111.249	5:30:00 PM	10.115	0.588	322.417
5:45:00 AM	7.933	0.344	136.34	5:45:00 PM	10.183	0.663	366.882
6:00:00 AM	8.049	0.319	128.994	6:00:00 PM	10.329	0.617	348.033
6:15:00 AM	8.416	0.348	149.476	6:15:00 PM	10.347	0.63	355.939
6:30:00 AM	8.574	0.376	165.573	6:30:00 PM	10.363	0.626	354.409
6:45:00 AM	8.647	0.44	195.715	6:45:00 PM	10.553	0.659	382.198
7:00:00 AM	8.863	0.402	184.944	7:00:00 PM	10.727	0.669	395.896
7:15:00 AM	9.103	0.449	213.987	7:15:00 PM	10.725	0.666	394.281
7:30:00 AM	9.344	0.514	254.062	7:30:00 PM	10.78	0.665	396.187
7:45:00 AM	9.612	0.481	246.484	7:45:00 PM	10.852	0.688	413.543
8:00:00 AM	9.894	0.607	323.397	8:00:00 PM	10.889	0.684	412.822
8:15:00 AM	9.95	0.608	326.285	8:15:00 PM	10.834	0.668	400.854
8:30:00 AM	9.957	0.568	305.366	8:30:00 PM	10.789	0.74	441.548
8:45:00 AM	9.871	0.565	300.292	8:45:00 PM	10.886	0.681	411.224
9:00:00 AM	9.676	0.503	260.262	9:00:00 PM	11.024	0.722	442.992
9:15:00 AM	9.584	0.502	256.287	9:15:00 PM	11.021	0.779	477.379
9:30:00 AM	9.438	0.557	278.993	9:30:00 PM	11.148	0.742	461.913
9:45:00 AM	9.309	0.47	230.926	9:45:00 PM	11.166	0.706	440.097
10:00:00 AM	9.196	0.428	206.904	10:00:00 PM	11.011	0.714	437.57
10:15:00 AM	9.141	0.515	246.935	10:15:00 PM	10.971	0.695	423.64
10:30:00 AM	9.182	0.44	212.505	10:30:00 PM	10.961	0.684	416.292
10:45:00 AM	9.319	0.514	252.916	10:45:00 PM	10.853	0.798	479.618
11:00:00 AM	9.371	0.564	279.69	11:00:00 PM	10.702	0.6	354.079
11:15:00 AM	9.345	0.461	227.455	11:15:00 PM	10.526	0.652	376.594
11:30:00 AM	9.399	0.456	227.187	11:30:00 PM	10.273	0.621	347.481
11:45:00 AM	9.362	0.535	264.75	11:45:00 PM	9.941	0.537	287.899
				Inches	Feet/Sec	GPM	
Daily Avg:				9.522	0.511	268.273	
Daily Min:				7.623	0.185	70.078	
Daily Max:				11.166	0.798	479.618	
Peak to Avg:						1.79	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**
Location: **MH-7033**
Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**
Time Period: **11/30/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Thursday - A.M. 11/30/2023

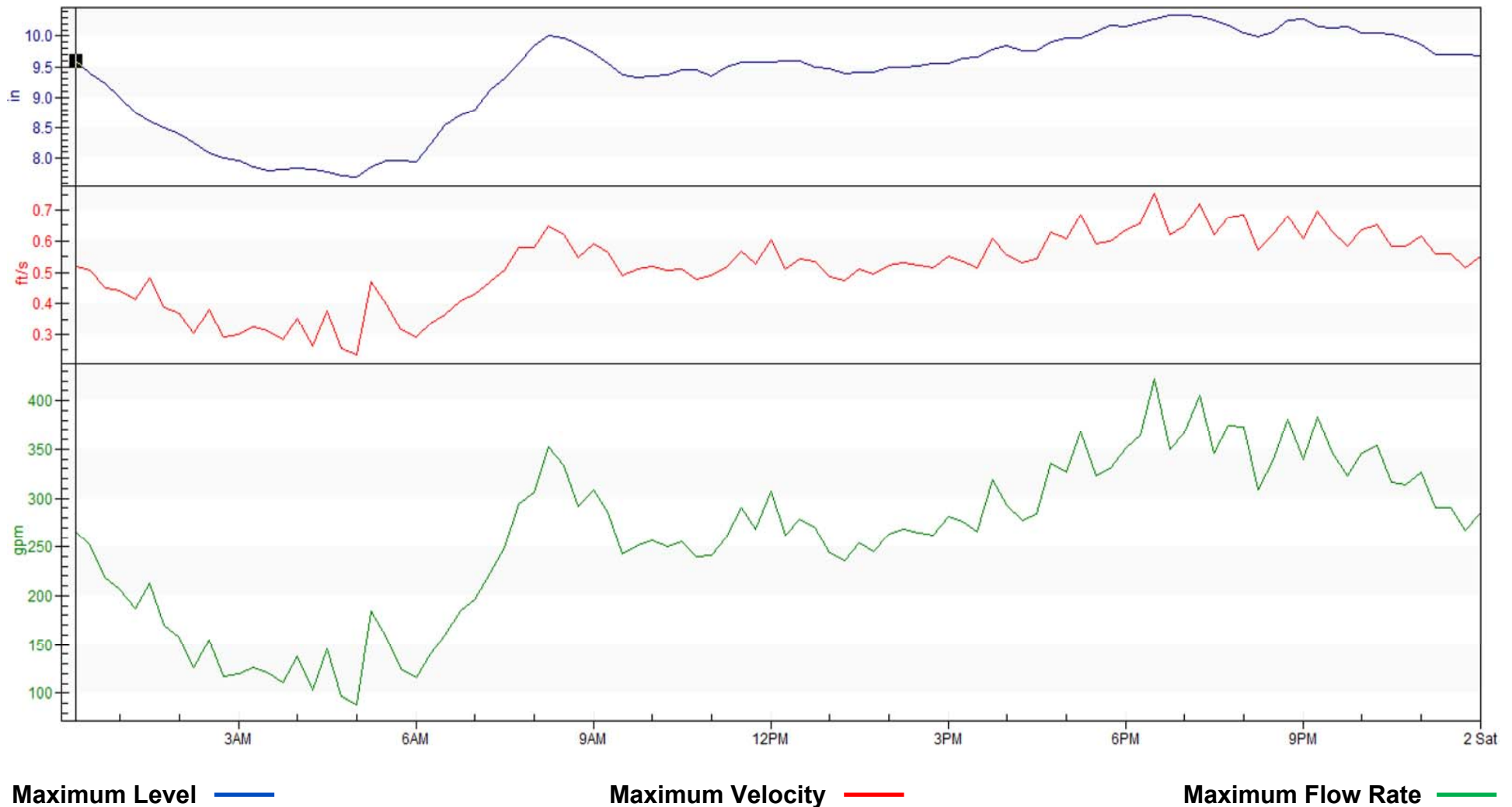
Time	Level	Velocity	Flow
12:00:00 AM	9.809	0.514	270.658
12:15:00 AM	9.661	0.464	239.672
12:30:00 AM	9.462	0.465	233.659
12:45:00 AM	9.24	0.465	226.396
1:00:00 AM	9.015	0.403	189.802
1:15:00 AM	8.831	0.369	168.773
1:30:00 AM	8.688	0.338	151.218
1:45:00 AM	8.564	0.308	135.273
2:00:00 AM	8.464	0.388	167.563
2:15:00 AM	8.412	0.331	141.989
2:30:00 AM	8.278	0.377	158.367
2:45:00 AM	8.184	0.265	109.661
3:00:00 AM	8.055	0.21	84.97
3:15:00 AM	7.929	0.392	155.08
3:30:00 AM	7.906	0.292	115.047
3:45:00 AM	7.854	0.335	130.73
4:00:00 AM	7.804	0.24	92.925
4:15:00 AM	7.822	0.477	185.229
4:30:00 AM	7.794	0.259	100.222
4:45:00 AM	7.786	0.453	175.023
5:00:00 AM	7.833	0.266	103.661
5:15:00 AM	7.881	0.418	163.926
5:30:00 AM	7.904	0.478	188.172
5:45:00 AM	8.057	0.367	148.283
6:00:00 AM	8.243	0.287	119.873
6:15:00 AM	8.47	0.335	144.98
6:30:00 AM	8.805	0.392	178.928
6:45:00 AM	8.933	0.432	200.863
7:00:00 AM	8.965	0.423	197.447
7:15:00 AM	9.197	0.444	214.794
7:30:00 AM	9.522	0.563	284.909
7:45:00 AM	9.833	0.576	304.572
8:00:00 AM	9.97	0.565	304.115
8:15:00 AM	10.015	0.611	330.638
8:30:00 AM	10.003	0.618	334.259
8:45:00 AM	9.869	0.608	322.872
9:00:00 AM	9.781	0.509	267.096
9:15:00 AM	9.631	0.47	241.853
9:30:00 AM	9.376	0.487	241.701
9:45:00 AM	9.162	0.373	179.534
10:00:00 AM	9.129	0.516	246.989
10:15:00 AM	9.128	0.398	190.715
10:30:00 AM	9.16	0.422	202.806
10:45:00 AM	9.223	0.464	225.09
11:00:00 AM	9.204	0.472	228.471
11:15:00 AM	9.215	0.461	223.663
11:30:00 AM	9.15	0.452	217.252
11:45:00 AM	9.111	0.475	226.886

Thursday - P.M. 11/30/2023

Time	Level	Velocity	Flow
12:00:00 PM	9.249	0.429	209.049
12:15:00 PM	9.376	0.486	241.054
12:30:00 PM	9.451	0.558	279.709
12:45:00 PM	9.456	0.465	233.144
1:00:00 PM	9.546	0.485	246.301
1:15:00 PM	9.583	0.612	312.627
1:30:00 PM	9.581	0.448	228.973
1:45:00 PM	9.597	0.481	246.135
2:00:00 PM	9.548	0.463	235.421
2:15:00 PM	9.434	0.479	239.805
2:30:00 PM	9.489	0.505	254.327
2:45:00 PM	9.484	0.445	224.285
3:00:00 PM	9.565	0.466	237.535
3:15:00 PM	9.586	0.537	274.459
3:30:00 PM	9.597	0.554	283.536
3:45:00 PM	9.562	0.497	252.862
4:00:00 PM	9.465	0.448	224.973
4:15:00 PM	9.517	0.572	289.255
4:30:00 PM	9.612	0.504	258.207
4:45:00 PM	9.849	0.543	287.775
5:00:00 PM	9.957	0.574	308.481
5:15:00 PM	9.927	0.578	309.424
5:30:00 PM	9.877	0.588	312.533
5:45:00 PM	9.985	0.582	313.659
6:00:00 PM	10.205	0.656	364.053
6:15:00 PM	10.218	0.64	355.666
6:30:00 PM	10.29	0.687	385.503
6:45:00 PM	10.493	0.731	420.489
7:00:00 PM	10.579	0.649	377.525
7:15:00 PM	10.617	0.749	437.823
7:30:00 PM	10.652	0.694	407.34
7:45:00 PM	10.684	0.798	470.275
8:00:00 PM	10.747	0.753	446.996
8:15:00 PM	10.719	0.681	402.889
8:30:00 PM	10.802	0.684	408.799
8:45:00 PM	10.951	0.788	478.962
9:00:00 PM	10.963	0.819	499.028
9:15:00 PM	10.817	0.676	404.45
9:30:00 PM	10.835	0.69	414.034
9:45:00 PM	10.93	0.825	500.268
10:00:00 PM	11.073	0.863	532.49
10:15:00 PM	11.036	0.791	485.746
10:30:00 PM	10.854	0.725	435.893
10:45:00 PM	10.776	0.659	392.242
11:00:00 PM	10.695	0.75	442.65
11:15:00 PM	10.55	0.651	377.308
11:30:00 PM	10.338	0.583	328.966
11:45:00 PM	10.143	0.566	311.49

	Inches	Feet/Sec	GPM
Daily Avg:	9.480	0.518	269.582
Daily Min:	7.786	0.21	84.97
Daily Max:	11.073	0.863	532.49
Peak to Avg:			1.98

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**
Location: **MH-7033**
Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**
Time Period: **12/1/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Friday - A.M. 12/1/2023

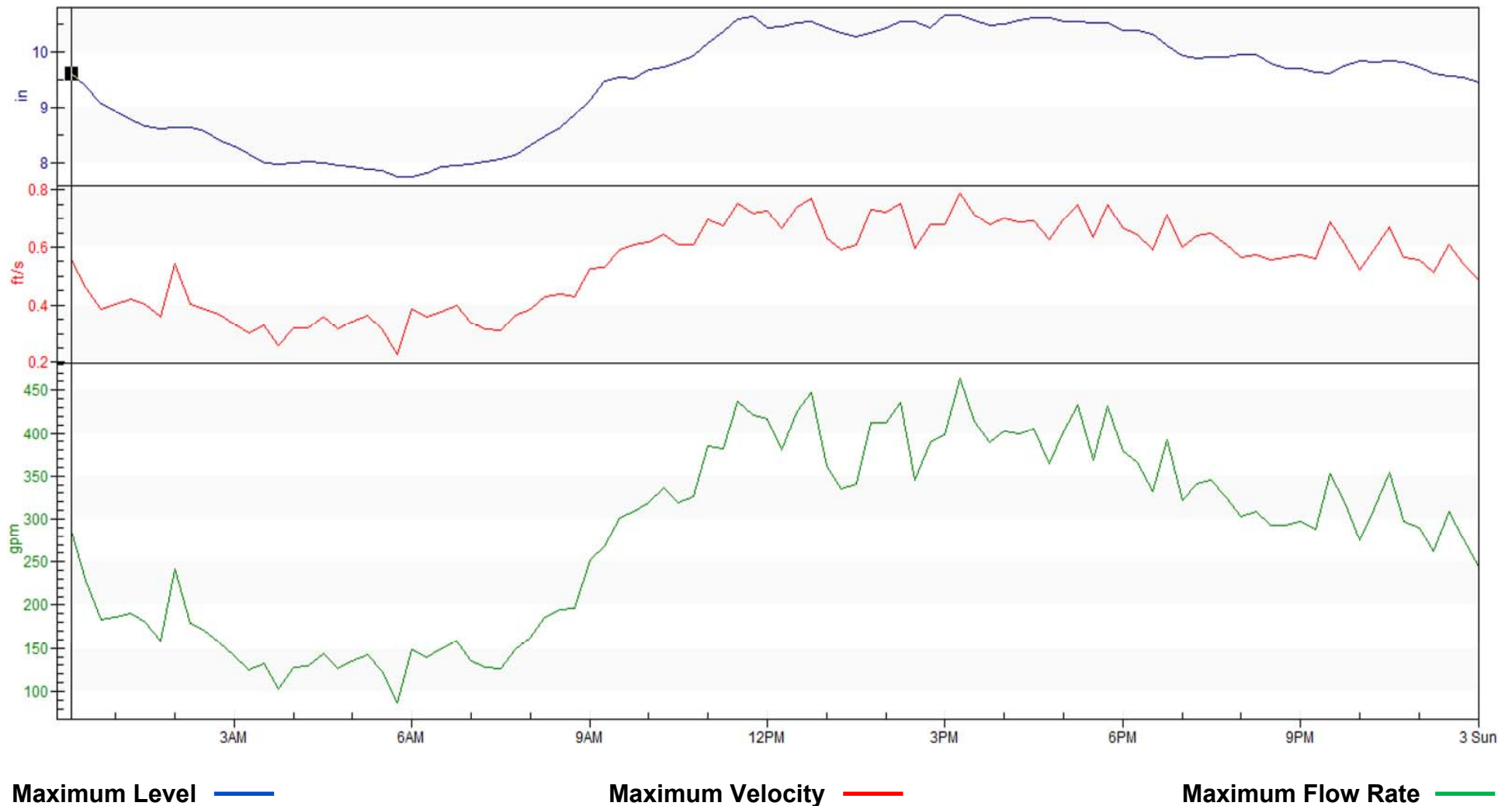
Time	Level	Velocity	Flow
12:00:00 AM	9.853	0.555	293.988
12:15:00 AM	9.605	0.52	266.294
12:30:00 AM	9.383	0.507	251.984
12:45:00 AM	9.218	0.449	217.811
1:00:00 AM	8.994	0.441	206.833
1:15:00 AM	8.758	0.412	186.431
1:30:00 AM	8.598	0.481	212.461
1:45:00 AM	8.506	0.391	170.088
2:00:00 AM	8.396	0.367	157.055
2:15:00 AM	8.25	0.304	126.864
2:30:00 AM	8.084	0.381	154.595
2:45:00 AM	8.007	0.291	116.75
3:00:00 AM	7.976	0.302	120.462
3:15:00 AM	7.87	0.323	126.379
3:30:00 AM	7.797	0.314	121.5
3:45:00 AM	7.815	0.285	110.506
4:00:00 AM	7.841	0.353	137.752
4:15:00 AM	7.814	0.265	102.846
4:30:00 AM	7.789	0.377	145.673
4:45:00 AM	7.709	0.255	97.05
5:00:00 AM	7.696	0.235	89.303
5:15:00 AM	7.859	0.471	183.936
5:30:00 AM	7.958	0.396	157.506
5:45:00 AM	7.958	0.316	125.542
6:00:00 AM	7.942	0.293	116.24
6:15:00 AM	8.24	0.337	140.481
6:30:00 AM	8.547	0.364	159.347
6:45:00 AM	8.7	0.411	184.261
7:00:00 AM	8.784	0.43	195.709
7:15:00 AM	9.112	0.468	223.604
7:30:00 AM	9.306	0.507	248.922
7:45:00 AM	9.558	0.579	294.439
8:00:00 AM	9.839	0.578	305.527
8:15:00 AM	10.016	0.65	351.742
8:30:00 AM	9.961	0.62	333.251
8:45:00 AM	9.869	0.549	291.341
9:00:00 AM	9.726	0.593	308.711
9:15:00 AM	9.556	0.561	285.553
9:30:00 AM	9.372	0.49	242.809
9:45:00 AM	9.333	0.509	251.099
10:00:00 AM	9.342	0.519	256.27
10:15:00 AM	9.358	0.506	250.394
10:30:00 AM	9.441	0.51	255.315
10:45:00 AM	9.453	0.48	240.571
11:00:00 AM	9.345	0.49	241.917
11:15:00 AM	9.489	0.513	258.827
11:30:00 AM	9.564	0.569	289.784
11:45:00 AM	9.565	0.527	268.561

Friday - P.M. 12/1/2023

Time	Level	Velocity	Flow
12:00:00 PM	9.568	0.602	306.842
12:15:00 PM	9.585	0.512	261.358
12:30:00 PM	9.603	0.543	278.231
12:45:00 PM	9.496	0.535	269.757
1:00:00 PM	9.472	0.485	243.961
1:15:00 PM	9.384	0.475	235.98
1:30:00 PM	9.401	0.51	253.844
1:45:00 PM	9.403	0.493	245.474
2:00:00 PM	9.493	0.523	263.82
2:15:00 PM	9.501	0.531	267.918
2:30:00 PM	9.517	0.524	264.917
2:45:00 PM	9.561	0.514	261.707
3:00:00 PM	9.562	0.552	281.07
3:15:00 PM	9.644	0.535	275.699
3:30:00 PM	9.667	0.515	265.99
3:45:00 PM	9.786	0.606	318.429
4:00:00 PM	9.834	0.555	293.351
4:15:00 PM	9.77	0.529	277.271
4:30:00 PM	9.763	0.543	284.255
4:45:00 PM	9.902	0.628	335.132
5:00:00 PM	9.971	0.607	326.497
5:15:00 PM	9.959	0.685	367.874
5:30:00 PM	10.069	0.593	323.218
5:45:00 PM	10.163	0.598	329.91
6:00:00 PM	10.151	0.637	351.143
6:15:00 PM	10.217	0.655	363.836
6:30:00 PM	10.272	0.753	421.672
6:45:00 PM	10.328	0.621	349.867
7:00:00 PM	10.339	0.649	366.564
7:15:00 PM	10.32	0.72	405.386
7:30:00 PM	10.247	0.62	345.775
7:45:00 PM	10.171	0.678	374.469
8:00:00 PM	10.056	0.686	373.365
8:15:00 PM	9.98	0.572	308.233
8:30:00 PM	10.063	0.623	339.339
8:45:00 PM	10.259	0.682	381.04
9:00:00 PM	10.275	0.606	339.107
9:15:00 PM	10.155	0.696	383.908
9:30:00 PM	10.135	0.632	347.582
9:45:00 PM	10.16	0.584	322.349
10:00:00 PM	10.052	0.635	345.479
10:15:00 PM	10.045	0.651	353.746
10:30:00 PM	10.028	0.583	316.284
10:45:00 PM	9.972	0.583	313.669
11:00:00 PM	9.854	0.617	327.141
11:15:00 PM	9.703	0.56	290.913
11:30:00 PM	9.696	0.559	290.093
11:45:00 PM	9.699	0.514	266.739

	Inches	Feet/Sec	GPM
Daily Avg:	9.343	0.514	259.900
Daily Min:	7.696	0.235	89.303
Daily Max:	10.339	0.753	421.672
Peak to Avg:			1.62

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **12/2/2023, 12:00 a.m. - 12:00 p.m.**

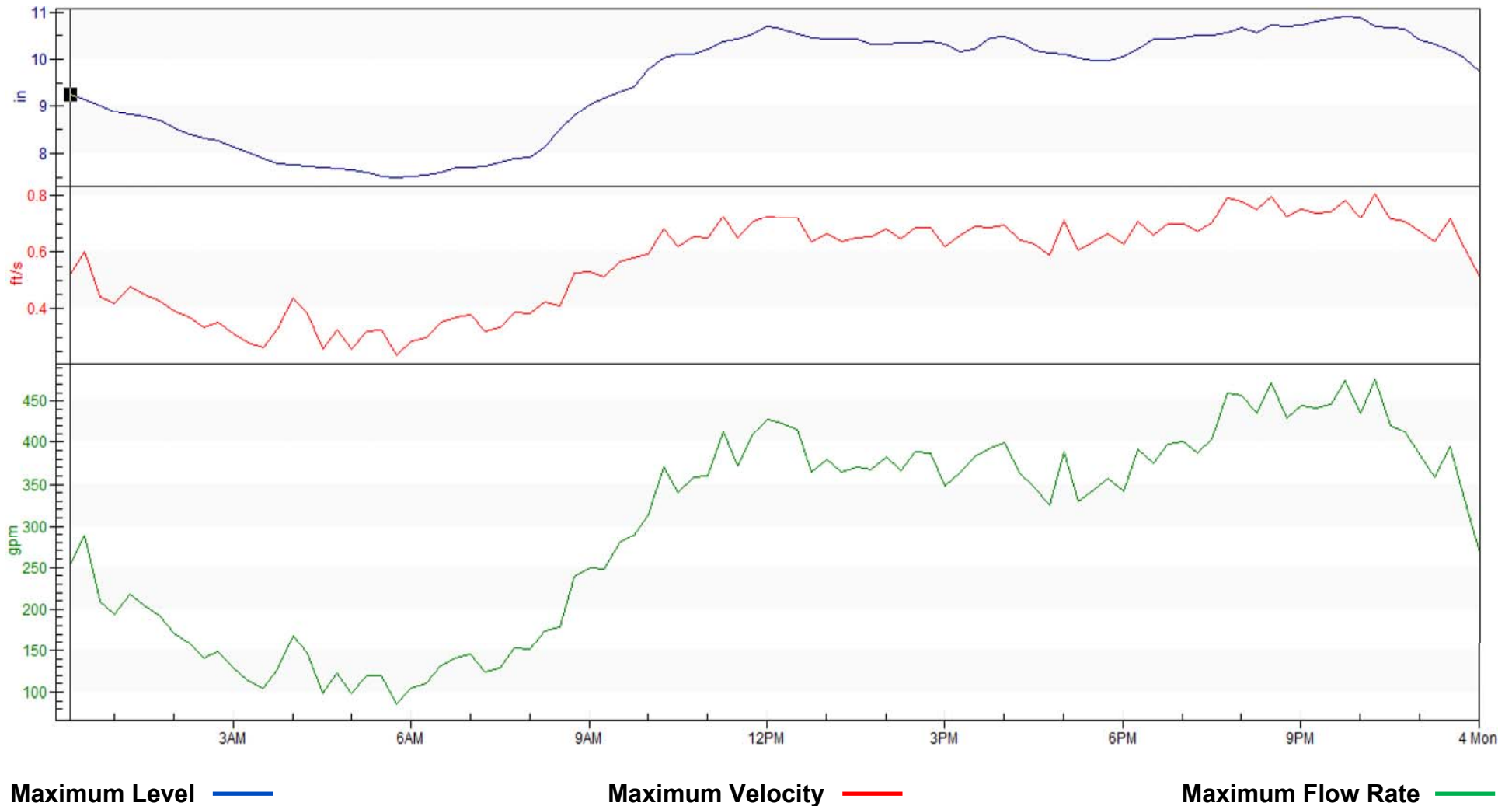
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Saturday - A.M. 12/2/2023

Saturday - P.M. 12/2/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	9.684	0.55	284.933	12:00:00 PM	10.433	0.729	416.097
12:15:00 AM	9.599	0.557	284.955	12:15:00 PM	10.446	0.665	380.179
12:30:00 AM	9.373	0.46	228.335	12:30:00 PM	10.519	0.738	426.164
12:45:00 AM	9.06	0.387	183.167	12:45:00 PM	10.537	0.773	447.004
1:00:00 AM	8.927	0.401	186.324	1:00:00 PM	10.434	0.633	361.396
1:15:00 AM	8.774	0.421	191.087	1:15:00 PM	10.338	0.593	334.873
1:30:00 AM	8.66	0.405	180.708	1:30:00 PM	10.263	0.609	340.29
1:45:00 AM	8.602	0.359	158.463	1:45:00 PM	10.337	0.731	412.468
2:00:00 AM	8.623	0.544	241.234	2:00:00 PM	10.434	0.721	412.017
2:15:00 AM	8.636	0.401	178.22	2:15:00 PM	10.548	0.753	436.203
2:30:00 AM	8.556	0.387	169.902	2:30:00 PM	10.529	0.597	344.778
2:45:00 AM	8.399	0.366	156.727	2:45:00 PM	10.434	0.68	388.602
3:00:00 AM	8.286	0.334	140.151	3:00:00 PM	10.645	0.677	397.145
3:15:00 AM	8.163	0.304	125.346	3:15:00 PM	10.653	0.789	463.02
3:30:00 AM	8.003	0.33	132.415	3:30:00 PM	10.556	0.714	413.946
3:45:00 AM	7.973	0.257	102.344	3:45:00 PM	10.465	0.678	388.904
4:00:00 AM	8.003	0.319	127.857	4:00:00 PM	10.488	0.699	402.159
4:15:00 AM	8.016	0.32	128.518	4:15:00 PM	10.561	0.687	398.737
4:30:00 AM	8.004	0.357	143.157	4:30:00 PM	10.611	0.693	404.823
4:45:00 AM	7.946	0.317	125.942	4:45:00 PM	10.597	0.624	363.904
5:00:00 AM	7.925	0.34	134.359	5:00:00 PM	10.547	0.695	402.525
5:15:00 AM	7.893	0.362	142.246	5:15:00 PM	10.54	0.749	433.569
5:30:00 AM	7.855	0.314	122.753	5:30:00 PM	10.523	0.637	368.034
5:45:00 AM	7.754	0.228	87.34	5:45:00 PM	10.505	0.749	431.656
6:00:00 AM	7.744	0.387	148.314	6:00:00 PM	10.383	0.667	378.831
6:15:00 AM	7.82	0.361	140.027	6:15:00 PM	10.378	0.646	366.263
6:30:00 AM	7.927	0.377	149.003	6:30:00 PM	10.307	0.59	331.826
6:45:00 AM	7.961	0.4	158.962	6:45:00 PM	10.109	0.714	391.487
7:00:00 AM	7.976	0.337	134.335	7:00:00 PM	9.931	0.6	321.404
7:15:00 AM	8.015	0.317	127.464	7:15:00 PM	9.89	0.641	341.164
7:30:00 AM	8.053	0.313	126.574	7:30:00 PM	9.909	0.648	345.924
7:45:00 AM	8.142	0.363	148.771	7:45:00 PM	9.908	0.609	325.06
8:00:00 AM	8.312	0.384	162.065	8:00:00 PM	9.943	0.565	302.806
8:15:00 AM	8.476	0.43	186.087	8:15:00 PM	9.946	0.575	308.433
8:30:00 AM	8.641	0.439	195.365	8:30:00 PM	9.784	0.558	293.152
8:45:00 AM	8.857	0.428	196.927	8:45:00 PM	9.7	0.564	292.946
9:00:00 AM	9.129	0.526	251.635	9:00:00 PM	9.692	0.572	296.658
9:15:00 AM	9.475	0.531	267.331	9:15:00 PM	9.641	0.561	289.012
9:30:00 AM	9.542	0.593	301.355	9:30:00 PM	9.606	0.687	352.036
9:45:00 AM	9.508	0.61	308.491	9:45:00 PM	9.753	0.613	320.342
10:00:00 AM	9.677	0.617	319.299	10:00:00 PM	9.843	0.521	275.558
10:15:00 AM	9.719	0.646	335.959	10:15:00 PM	9.815	0.592	312.282
10:30:00 AM	9.8	0.607	319.288	10:30:00 PM	9.837	0.671	354.654
10:45:00 AM	9.917	0.61	325.979	10:45:00 PM	9.802	0.563	296.366
11:00:00 AM	10.157	0.696	384.005	11:00:00 PM	9.723	0.557	290.041
11:15:00 AM	10.346	0.675	381.569	11:15:00 PM	9.603	0.512	262.282
11:30:00 AM	10.58	0.752	437.217	11:30:00 PM	9.56	0.608	309.453
11:45:00 AM	10.638	0.72	421.935	11:45:00 PM	9.538	0.544	276.049
				Inches	Feet/Sec	GPM	
Daily Avg:				9.452	0.543	282.127	
Daily Min:				7.744	0.228	87.34	
Daily Max:				10.653	0.789	463.02	
Peak to Avg:						1.64	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **12/3/2023, 12:00 a.m. - 12:00 p.m.**

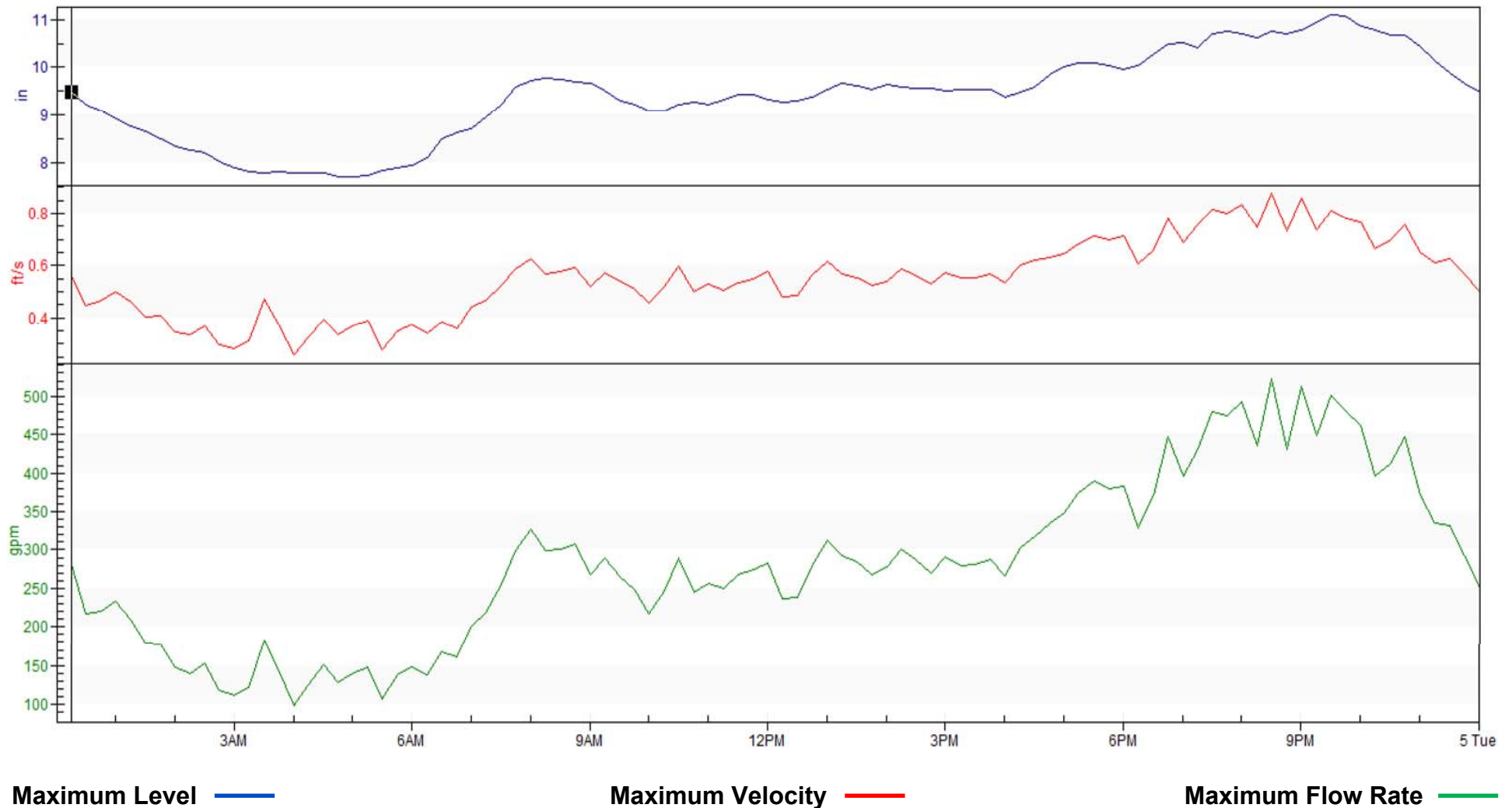
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Sunday - A.M. 12/3/2023

Sunday - P.M. 12/3/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	9.449	0.487	244.182	12:00:00 PM	10.69	0.726	427.888
12:15:00 AM	9.257	0.52	253.625	12:15:00 PM	10.641	0.723	423.445
12:30:00 AM	9.138	0.603	288.924	12:30:00 PM	10.521	0.719	415.166
12:45:00 AM	9	0.443	208.233	12:45:00 PM	10.441	0.636	363.801
1:00:00 AM	8.89	0.42	194.176	1:00:00 PM	10.434	0.664	379.309
1:15:00 AM	8.828	0.476	217.996	1:15:00 PM	10.431	0.639	364.79
1:30:00 AM	8.78	0.451	204.915	1:30:00 PM	10.418	0.65	370.663
1:45:00 AM	8.684	0.43	192.456	1:45:00 PM	10.31	0.653	367.123
2:00:00 AM	8.519	0.391	170.69	2:00:00 PM	10.313	0.681	383.177
2:15:00 AM	8.407	0.371	159.174	2:15:00 PM	10.359	0.646	365.413
2:30:00 AM	8.309	0.334	140.939	2:30:00 PM	10.342	0.687	387.931
2:45:00 AM	8.269	0.354	148.3	2:45:00 PM	10.364	0.685	387.783
3:00:00 AM	8.129	0.315	128.784	3:00:00 PM	10.31	0.619	348.262
3:15:00 AM	8.025	0.283	113.937	3:15:00 PM	10.168	0.661	364.967
3:30:00 AM	7.902	0.267	104.957	3:30:00 PM	10.21	0.69	383.144
3:45:00 AM	7.796	0.33	127.499	3:45:00 PM	10.449	0.687	393.134
4:00:00 AM	7.759	0.435	167.275	4:00:00 PM	10.476	0.695	399.284
4:15:00 AM	7.72	0.386	147.351	4:15:00 PM	10.367	0.64	362.449
4:30:00 AM	7.694	0.259	98.504	4:30:00 PM	10.175	0.628	346.931
4:45:00 AM	7.685	0.325	123.145	4:45:00 PM	10.139	0.59	324.734
5:00:00 AM	7.658	0.261	98.311	5:00:00 PM	10.101	0.71	388.685
5:15:00 AM	7.596	0.321	119.902	5:15:00 PM	10.031	0.606	328.956
5:30:00 AM	7.529	0.326	120.247	5:30:00 PM	9.974	0.636	342.572
5:45:00 AM	7.489	0.238	86.969	5:45:00 PM	9.985	0.662	356.998
6:00:00 AM	7.509	0.285	104.591	6:00:00 PM	10.062	0.628	342.127
6:15:00 AM	7.549	0.3	111	6:15:00 PM	10.213	0.706	392.15
6:30:00 AM	7.609	0.351	131.297	6:30:00 PM	10.424	0.658	375.165
6:45:00 AM	7.694	0.371	140.774	6:45:00 PM	10.428	0.698	398.217
7:00:00 AM	7.709	0.381	145.097	7:00:00 PM	10.455	0.7	400.899
7:15:00 AM	7.731	0.324	124.017	7:15:00 PM	10.5	0.673	387.81
7:30:00 AM	7.799	0.334	129.381	7:30:00 PM	10.502	0.701	404.024
7:45:00 AM	7.901	0.387	152.484	7:45:00 PM	10.564	0.792	459.882
8:00:00 AM	7.93	0.384	152.133	8:00:00 PM	10.656	0.777	456.017
8:15:00 AM	8.131	0.423	173.326	8:15:00 PM	10.573	0.75	435.874
8:30:00 AM	8.518	0.411	179.062	8:30:00 PM	10.733	0.797	472.127
8:45:00 AM	8.806	0.524	239.237	8:45:00 PM	10.707	0.726	428.86
9:00:00 AM	9.029	0.53	250.193	9:00:00 PM	10.728	0.751	444.524
9:15:00 AM	9.174	0.513	247.34	9:15:00 PM	10.81	0.738	441.358
9:30:00 AM	9.312	0.568	279.122	9:30:00 PM	10.858	0.742	446.557
9:45:00 AM	9.417	0.578	288.29	9:45:00 PM	10.91	0.783	473.948
10:00:00 AM	9.798	0.595	312.684	10:00:00 PM	10.87	0.723	435.332
10:15:00 AM	10.034	0.682	369.856	10:15:00 PM	10.703	0.806	475.642
10:30:00 AM	10.105	0.62	339.814	10:30:00 PM	10.668	0.715	420.637
10:45:00 AM	10.114	0.655	358.966	10:45:00 PM	10.631	0.706	413.385
11:00:00 AM	10.201	0.649	359.678	11:00:00 PM	10.412	0.673	383.347
11:15:00 AM	10.373	0.727	412.123	11:15:00 PM	10.327	0.637	358.836
11:30:00 AM	10.432	0.652	372.37	11:30:00 PM	10.174	0.714	394.81
11:45:00 AM	10.534	0.708	409.423	11:45:00 PM	10.027	0.613	332.367
				Inches	Feet/Sec	GPM	
Daily Avg:				9.506	0.565	298.411	
Daily Min:				7.489	0.238	86.969	
Daily Max:				10.91	0.806	475.642	
Peak to Avg:						1.59	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **12/4/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Monday - A.M. 12/4/2023

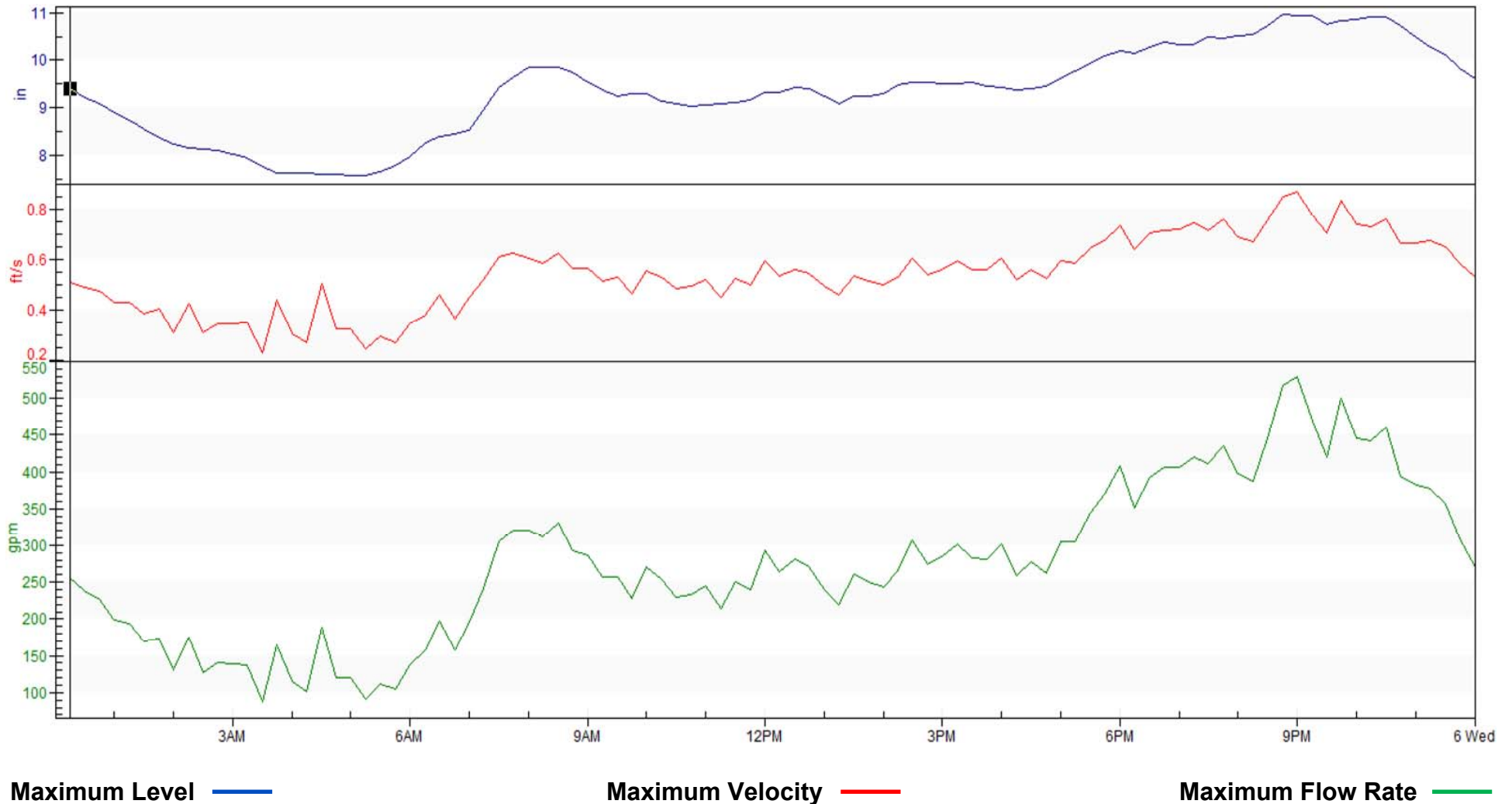
Time	Level	Velocity	Velocity
12:10:00 AM	9.746	0.514	268.244
12:15:00 AM	9.47	0.559	280.774
12:30:00 AM	9.218	0.448	217.422
12:45:00 AM	9.084	0.464	220.678
1:00:00 AM	8.924	0.502	232.945
1:15:00 AM	8.772	0.46	208.732
1:30:00 AM	8.665	0.401	179.129
1:45:00 AM	8.497	0.409	177.728
2:00:00 AM	8.343	0.347	147.089
2:15:00 AM	8.25	0.335	139.745
2:30:00 AM	8.195	0.368	152.37
2:45:00 AM	8.012	0.295	118.218
3:00:00 AM	7.893	0.283	111.099
3:15:00 AM	7.803	0.313	121.24
3:30:00 AM	7.778	0.472	181.867
3:45:00 AM	7.804	0.374	144.732
4:00:00 AM	7.78	0.257	99.176
4:15:00 AM	7.769	0.326	125.416
4:30:00 AM	7.783	0.391	150.954
4:45:00 AM	7.699	0.335	127.401
5:00:00 AM	7.701	0.368	139.896
5:15:00 AM	7.728	0.388	148.074
5:30:00 AM	7.832	0.276	107.381
5:45:00 AM	7.881	0.352	138.024
6:00:00 AM	7.948	0.372	147.565
6:15:00 AM	8.101	0.338	137.766
6:30:00 AM	8.509	0.384	167.281
6:45:00 AM	8.626	0.362	160.395
7:00:00 AM	8.721	0.444	199.932
7:15:00 AM	8.94	0.468	217.803
7:30:00 AM	9.226	0.523	253.968
7:45:00 AM	9.579	0.586	298.983
8:00:00 AM	9.724	0.627	326.238
8:15:00 AM	9.777	0.57	298.847
8:30:00 AM	9.741	0.578	301.436
8:45:00 AM	9.704	0.593	308.033
9:00:00 AM	9.657	0.518	267.147
9:15:00 AM	9.521	0.571	289.339
9:30:00 AM	9.301	0.54	264.978
9:45:00 AM	9.22	0.511	248.006
10:00:00 AM	9.091	0.455	216.443
10:15:00 AM	9.07	0.518	245.968
10:30:00 AM	9.205	0.598	289.71
10:45:00 AM	9.272	0.5	244.345
11:00:00 AM	9.22	0.527	255.828
11:15:00 AM	9.329	0.506	249.123
11:30:00 AM	9.438	0.536	268.253
11:45:00 AM	9.429	0.549	274.326

Monday - P.M. 12/4/2023

Time	Level	Velocity	Flow
12:00:00 PM	9.31	0.576	283.151
12:15:00 PM	9.28	0.482	235.834
12:30:00 PM	9.282	0.485	237.481
12:45:00 PM	9.385	0.561	278.68
1:00:00 PM	9.529	0.615	311.781
1:15:00 PM	9.668	0.565	292.19
1:30:00 PM	9.624	0.552	283.732
1:45:00 PM	9.547	0.526	267.316
2:00:00 PM	9.631	0.54	277.535
2:15:00 PM	9.6	0.586	300.214
2:30:00 PM	9.565	0.564	287.085
2:45:00 PM	9.559	0.528	268.842
3:00:00 PM	9.514	0.573	290.061
3:15:00 PM	9.525	0.553	279.995
3:30:00 PM	9.532	0.554	281.019
3:45:00 PM	9.524	0.568	287.922
4:00:00 PM	9.385	0.535	265.865
4:15:00 PM	9.477	0.602	302.97
4:30:00 PM	9.599	0.62	317.085
4:45:00 PM	9.856	0.633	335.55
5:00:00 PM	10.016	0.644	348.605
5:15:00 PM	10.096	0.686	375.363
5:30:00 PM	10.098	0.712	389.7
5:45:00 PM	10.04	0.698	378.881
6:00:00 PM	9.965	0.712	383.148
6:15:00 PM	10.028	0.606	328.596
6:30:00 PM	10.289	0.661	370.845
6:45:00 PM	10.48	0.779	447.712
7:00:00 PM	10.512	0.688	396.665
7:15:00 PM	10.419	0.755	430.383
7:30:00 PM	10.714	0.813	480.631
7:45:00 PM	10.746	0.8	474.932
8:00:00 PM	10.711	0.833	492.528
8:15:00 PM	10.631	0.745	435.809
8:30:00 PM	10.758	0.878	521.983
8:45:00 PM	10.705	0.73	431.169
9:00:00 PM	10.796	0.858	512.06
9:15:00 PM	10.942	0.738	448.192
9:30:00 PM	11.104	0.809	500.788
9:45:00 PM	11.079	0.781	481.895
10:00:00 PM	10.867	0.767	461.789
10:15:00 PM	10.775	0.664	395.735
10:30:00 PM	10.673	0.7	411.964
10:45:00 PM	10.667	0.759	446.168
11:00:00 PM	10.448	0.65	371.967
11:15:00 PM	10.154	0.609	335.672
11:30:00 PM	9.878	0.625	332.022
11:45:00 PM	9.663	0.566	292.462

	Inches	Feet/Sec	GPM
Daily Avg:	9.399	0.551	283.829
Daily Min:	7.699	0.257	99.176
Daily Max:	11.104	0.878	521.983
Peak to Avg:			1.84

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **12/5/2023, 12:00 a.m. - 12:00 p.m.**

Sewer Line Flow Study Summary

Project: City of McFarland, Sewer Flow Study

Location: MH-7033

Pipe Size: 24" VCP

Time Period: 11/22/2023, 12:00 a.m. - 12/5/2023, 12:00 a.m.

Level - Inches

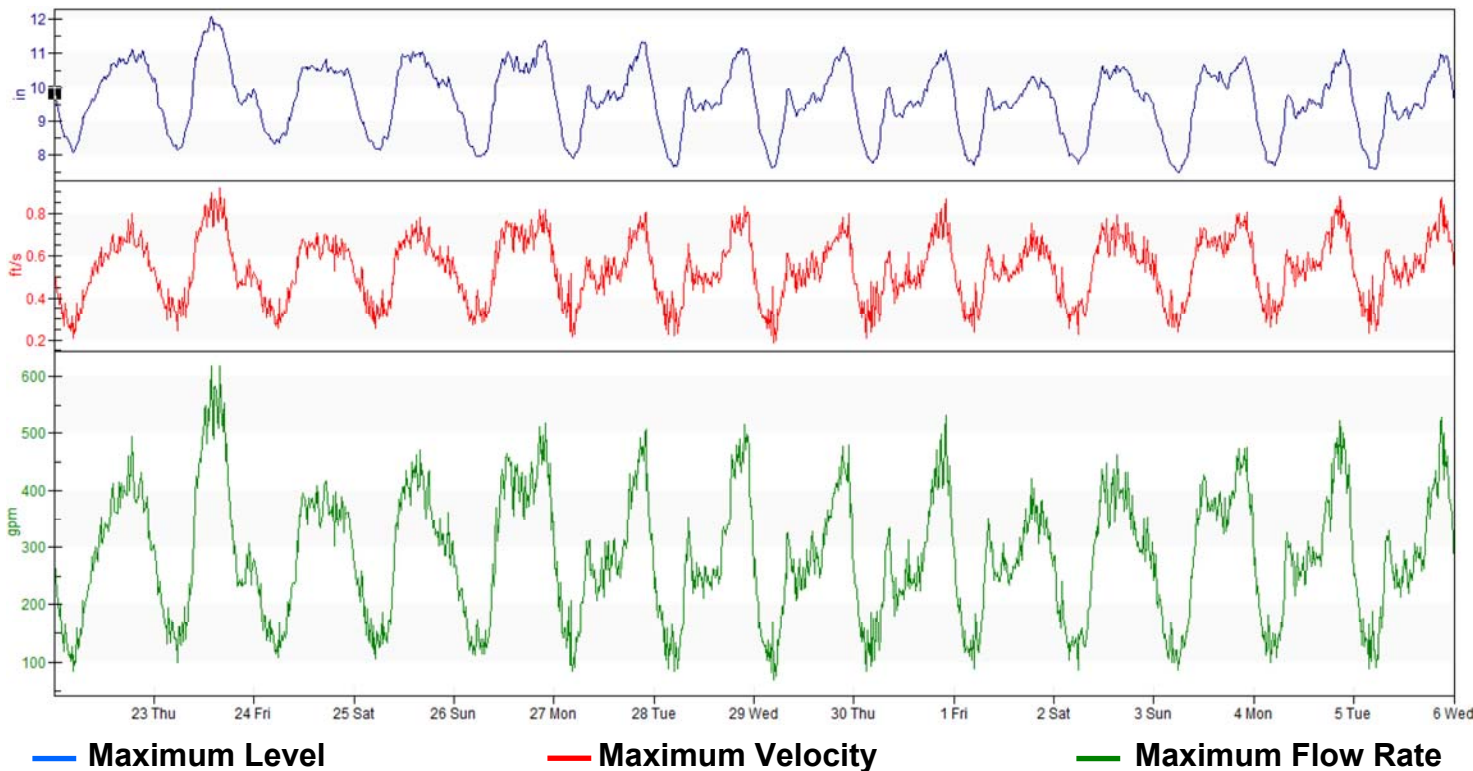
Average:	.....	9.586
Maximum:	.....	12.081
Minimum:	.....	7.476
Max d/D:	.....	0.50%

Velocity - Feet per Second

Average:	.....	0.494
Maximum:	.....	0.918
Minimum:	.....	0.127

Flow Rate - Gallons Per Minute

Average:	.....	262.867
Maximum:	.....	616.635
Minimum:	.....	47.031
Peak to Average	.....	1.96



Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Tuesday - A.M. 12/5/2023

Tuesday - P.M. 12/5/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	9.48	0.499	251.045	12:00:00 PM	9.324	0.596	293.668
12:15:00 AM	9.418	0.511	255.114	12:15:00 PM	9.335	0.534	263.158
12:30:00 AM	9.227	0.491	238.339	12:30:00 PM	9.436	0.561	280.459
12:45:00 AM	9.082	0.475	225.653	12:45:00 PM	9.417	0.542	270.537
1:00:00 AM	8.895	0.429	198.366	1:00:00 PM	9.241	0.493	239.951
1:15:00 AM	8.734	0.431	194.542	1:15:00 PM	9.082	0.462	219.54
1:30:00 AM	8.571	0.387	170.001	1:30:00 PM	9.246	0.535	260.49
1:45:00 AM	8.38	0.407	173.457	1:45:00 PM	9.252	0.513	250.028
2:00:00 AM	8.249	0.311	129.849	2:00:00 PM	9.302	0.497	243.998
2:15:00 AM	8.154	0.427	175.524	2:15:00 PM	9.474	0.53	266.473
2:30:00 AM	8.143	0.31	127.316	2:30:00 PM	9.53	0.607	307.536
2:45:00 AM	8.105	0.345	140.635	2:45:00 PM	9.54	0.541	274.454
3:00:00 AM	8.034	0.347	139.769	3:00:00 PM	9.505	0.562	283.715
3:15:00 AM	7.944	0.348	138.122	3:15:00 PM	9.511	0.597	301.634
3:30:00 AM	7.776	0.229	88.346	3:30:00 PM	9.527	0.558	282.581
3:45:00 AM	7.65	0.439	165.249	3:45:00 PM	9.451	0.56	280.772
4:00:00 AM	7.648	0.305	114.875	4:00:00 PM	9.424	0.603	301.061
4:15:00 AM	7.633	0.27	101.251	4:15:00 PM	9.368	0.521	258.017
4:30:00 AM	7.619	0.505	189.121	4:30:00 PM	9.409	0.559	278.489
4:45:00 AM	7.599	0.323	120.565	4:45:00 PM	9.46	0.522	262.081
5:00:00 AM	7.585	0.325	120.916	5:00:00 PM	9.624	0.595	305.394
5:15:00 AM	7.583	0.243	90.56	5:15:00 PM	9.778	0.582	305.361
5:30:00 AM	7.661	0.294	110.921	5:30:00 PM	9.936	0.643	344.73
5:45:00 AM	7.797	0.272	104.996	5:45:00 PM	10.096	0.675	369.548
6:00:00 AM	7.974	0.346	138.081	6:00:00 PM	10.188	0.736	407.599
6:15:00 AM	8.266	0.377	157.978	6:15:00 PM	10.143	0.637	350.832
6:30:00 AM	8.396	0.46	196.93	6:30:00 PM	10.276	0.702	392.978
6:45:00 AM	8.458	0.365	157.59	6:45:00 PM	10.386	0.714	405.468
7:00:00 AM	8.536	0.448	196.162	7:00:00 PM	10.319	0.721	405.924
7:15:00 AM	8.953	0.518	241.551	7:15:00 PM	10.333	0.745	420.204
7:30:00 AM	9.424	0.61	304.877	7:30:00 PM	10.5	0.715	411.752
7:45:00 AM	9.635	0.624	320.752	7:45:00 PM	10.466	0.758	434.479
8:00:00 AM	9.854	0.604	319.945	8:00:00 PM	10.501	0.69	397.339
8:15:00 AM	9.859	0.587	311.034	8:15:00 PM	10.552	0.668	387.042
8:30:00 AM	9.844	0.627	331.555	8:30:00 PM	10.713	0.753	444.995
8:45:00 AM	9.742	0.562	293.511	8:45:00 PM	10.964	0.848	516.543
9:00:00 AM	9.54	0.564	286.148	9:00:00 PM	10.947	0.87	528.583
9:15:00 AM	9.386	0.516	256.418	9:15:00 PM	10.931	0.773	469.095
9:30:00 AM	9.248	0.527	256.821	9:30:00 PM	10.748	0.706	419.243
9:45:00 AM	9.296	0.466	228.456	9:45:00 PM	10.821	0.835	500.318
10:00:00 AM	9.289	0.552	270.589	10:00:00 PM	10.864	0.74	445.409
10:15:00 AM	9.151	0.529	253.923	10:15:00 PM	10.918	0.728	441.134
10:30:00 AM	9.082	0.484	230.111	10:30:00 PM	10.911	0.76	460.293
10:45:00 AM	9.046	0.492	232.896	10:45:00 PM	10.724	0.666	393.919
11:00:00 AM	9.061	0.518	245.674	11:00:00 PM	10.497	0.665	382.585
11:15:00 AM	9.097	0.45	214.609	11:15:00 PM	10.271	0.672	376.273
11:30:00 AM	9.125	0.524	250.6	11:30:00 PM	10.119	0.651	357.157
11:45:00 AM	9.164	0.498	239.527	11:45:00 PM	9.828	0.585	309.082
				Inches	Feet/Sec	GPM	
Daily Avg:				9.338	0.541	276.328	
Daily Min:				7.583	0.229	88.346	
Daily Max:				10.964	0.87	528.583	
Peak to Avg:						1.91	

CITY OF MCFARLAND - SEWER FLOW STUDY

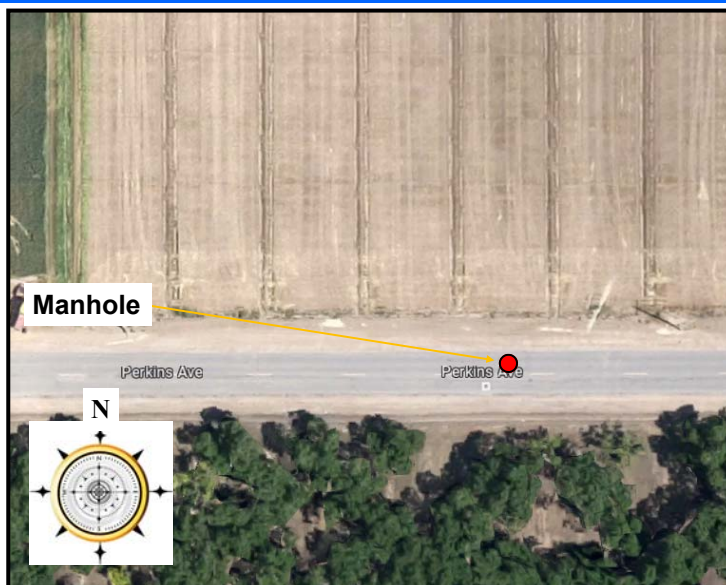
MH Location: **MH-7033**

**Perkins Rd., west of Garzoli Ave.
McFarland, CA 93250**

Pipe Size: **24" VCP**

Time Period: **7/26/2023 - 12:00 a.m. to
8/9/2023 - 12:00 a.m.**

GPS: **35.681631, -119.243109**



Manhole - Layout



Equipment

Teledyne Isco 2150 Area Velocity Flow Meter with 10' measuring range:

Level Measurement:

- Method - Submerged pressure transducer mounted in the flow stream
- Transducer Type - Differential linear integrated circuit pressure transducer
- Range (standard) 0.033 to 10 ft (0.010 to 3.05 m); Maximum Allowable Level 34 ft (10.5 m)
- Accuracy ± 0.01 ft from 0.033 to 10 ft, (± 0.003 m from 0.01 to 3.05 m,)
- Long-Term Stability ± 0.023 ft/yr (± 0.007 m/yr)
- Compensated Range 32° to 122°F (0° to 50°C)

Velocity Measurement:

- Method - Doppler ultrasonic, frequency 500 kHz
- Typical Minimum Depth 0.08 ft (25 mm)
- Range -5 to +20 ft/s (-1.5 to +6.1 m/s)
- Accuracy (in water with uniform velocity profile, speed of sound = 4850 ft/s, for indicated velocity range) ± 0.1 ft/s from -5 to 5 ft/s (± 0.03 m/s from— 1.5 to +1.5 m/s)
- $\pm 2\%$ of reading from 5 to 20 ft/s (1.5 to 6.1 m/s)

Method Of Insertion:

- 24 inch line requires confined space entry for installation of ring and transducer.

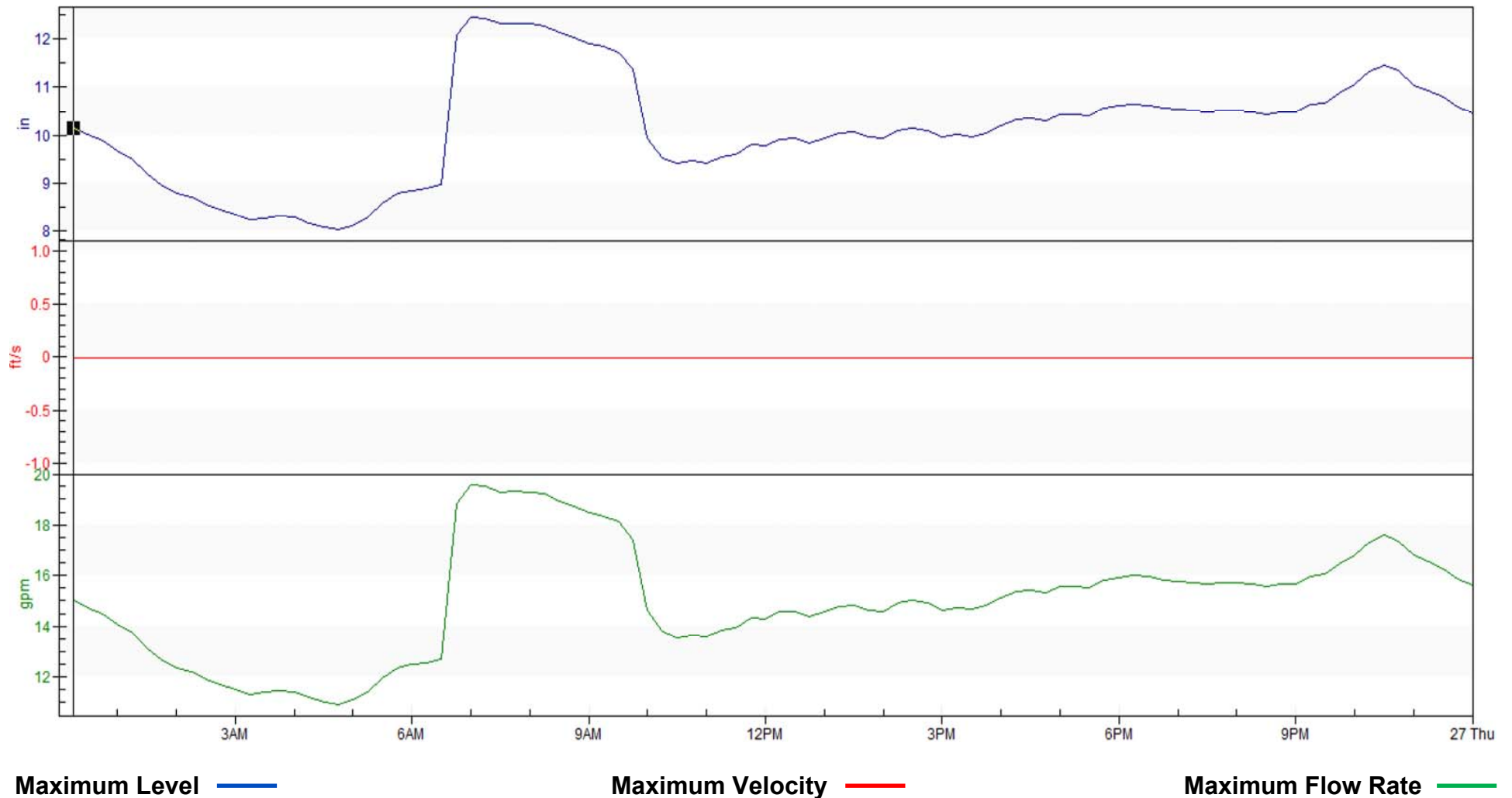


Gold Coast Environmental

Specializing in process instrumentation and calibration.



MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/26/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Wednesday - A.M. 7/26/2023

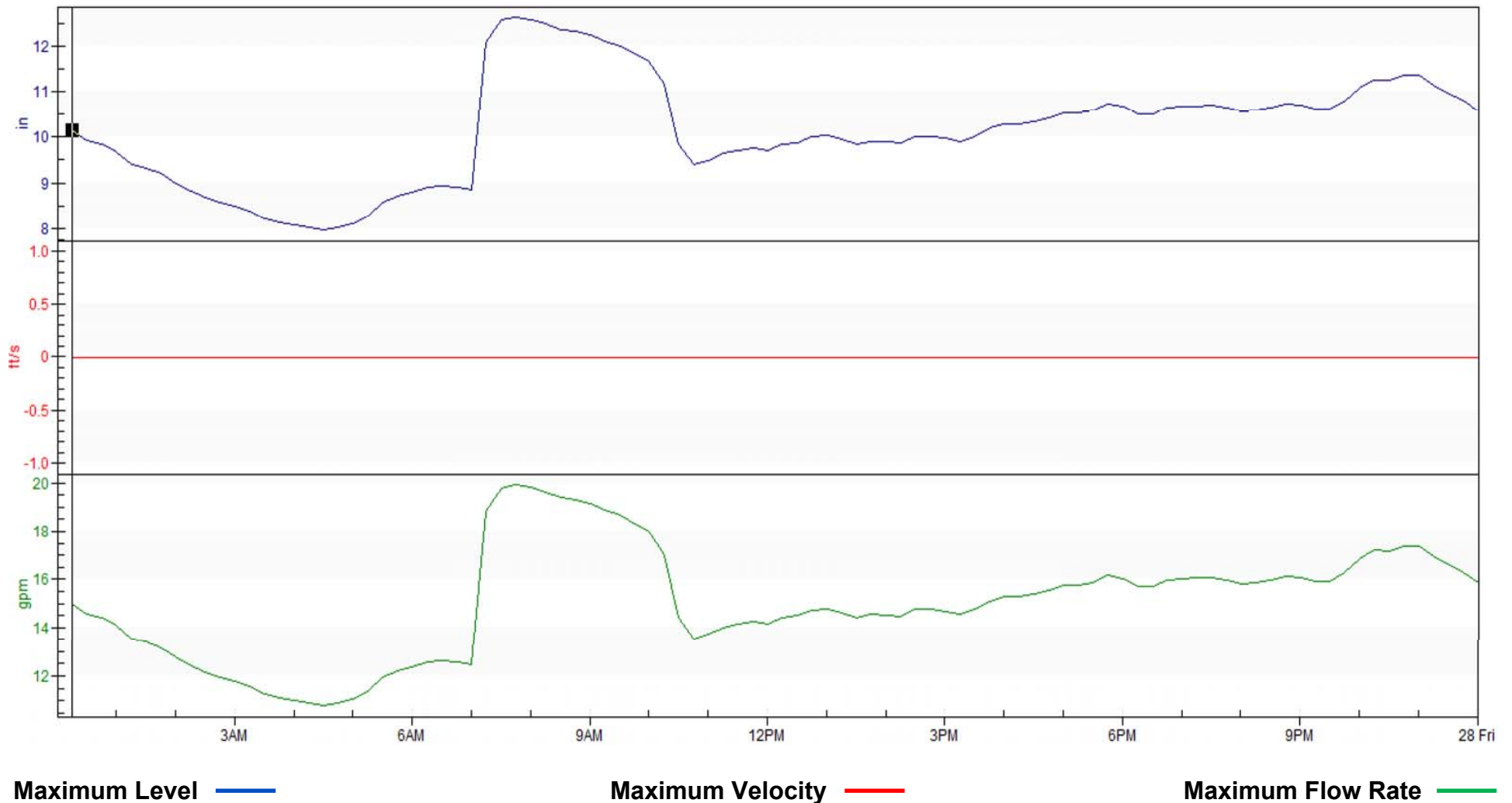
Time	Level	Velocity	Flow
12:15:00 AM	10.16	0	15.026
12:30:00 AM	10.013	0	14.74
12:45:00 AM	9.876	0	14.473
1:00:00 AM	9.67	0	14.071
1:15:00 AM	9.495	0	13.732
1:30:00 AM	9.196	0	13.156
1:45:00 AM	8.94	0	12.664
2:00:00 AM	8.776	0	12.35
2:15:00 AM	8.702	0	12.209
2:30:00 AM	8.547	0	11.915
2:45:00 AM	8.443	0	11.719
3:00:00 AM	8.334	0	11.512
3:15:00 AM	8.239	0	11.334
3:30:00 AM	8.274	0	11.399
3:45:00 AM	8.302	0	11.453
4:00:00 AM	8.28	0	11.411
4:15:00 AM	8.165	0	11.194
4:30:00 AM	8.069	0	11.016
4:45:00 AM	8.024	0	10.932
5:00:00 AM	8.111	0	11.094
5:15:00 AM	8.289	0	11.429
5:30:00 AM	8.566	0	11.952
5:45:00 AM	8.777	0	12.353
6:00:00 AM	8.848	0	12.487
6:15:00 AM	8.887	0	12.563
6:30:00 AM	8.964	0	12.709
6:45:00 AM	12.094	0	18.841
7:00:00 AM	12.454	0	19.553
7:15:00 AM	12.436	0	19.518
7:30:00 AM	12.315	0	19.277
7:45:00 AM	12.323	0	19.293
8:00:00 AM	12.319	0	19.286
8:15:00 AM	12.279	0	19.207
8:30:00 AM	12.148	0	18.946
8:45:00 AM	12.038	0	18.73
9:00:00 AM	11.9	0	18.457
9:15:00 AM	11.842	0	18.342
9:30:00 AM	11.731	0	18.122
9:45:00 AM	11.371	0	17.41
10:00:00 AM	9.95	0	14.617
10:15:00 AM	9.522	0	13.784
10:30:00 AM	9.403	0	13.555
10:45:00 AM	9.454	0	13.653
11:00:00 AM	9.424	0	13.595
11:15:00 AM	9.548	0	13.835
11:30:00 AM	9.591	0	13.918
11:45:00 AM	9.807	0	14.339

Wednesday - P.M. 7/26/2023

Time	Level	Velocity	Flow
12:00:00 PM	9.788	0	14.3
12:15:00 PM	9.924	0	14.567
12:30:00 PM	9.941	0	14.599
12:45:00 PM	9.821	0	14.366
1:00:00 PM	9.939	0	14.594
1:15:00 PM	10.038	0	14.789
1:30:00 PM	10.058	0	14.828
1:45:00 PM	9.953	0	14.623
2:00:00 PM	9.941	0	14.599
2:15:00 PM	10.103	0	14.916
2:30:00 PM	10.148	0	15.004
2:45:00 PM	10.104	0	14.917
3:00:00 PM	9.955	0	14.626
3:15:00 PM	10.009	0	14.732
3:30:00 PM	9.968	0	14.651
3:45:00 PM	10.051	0	14.813
4:00:00 PM	10.207	0	15.119
4:15:00 PM	10.322	0	15.344
4:30:00 PM	10.348	0	15.394
4:45:00 PM	10.302	0	15.305
5:00:00 PM	10.431	0	15.558
5:15:00 PM	10.443	0	15.581
5:30:00 PM	10.411	0	15.519
5:45:00 PM	10.563	0	15.818
6:00:00 PM	10.611	0	15.912
6:15:00 PM	10.652	0	15.991
6:30:00 PM	10.623	0	15.935
6:45:00 PM	10.572	0	15.834
7:00:00 PM	10.547	0	15.785
7:15:00 PM	10.507	0	15.706
7:30:00 PM	10.496	0	15.686
7:45:00 PM	10.511	0	15.715
8:00:00 PM	10.514	0	15.721
8:15:00 PM	10.478	0	15.65
8:30:00 PM	10.445	0	15.585
8:45:00 PM	10.477	0	15.647
9:00:00 PM	10.484	0	15.662
9:15:00 PM	10.632	0	15.953
9:30:00 PM	10.677	0	16.042
9:45:00 PM	10.874	0	16.428
10:00:00 PM	11.06	0	16.795
10:15:00 PM	11.322	0	17.312
10:30:00 PM	11.467	0	17.599
10:45:00 PM	11.343	0	17.354
11:00:00 PM	11.049	0	16.774
11:15:00 PM	10.945	0	16.569
11:30:00 PM	10.796	0	16.275
11:45:00 PM	10.591	0	15.873

	Inches	Feet/Sec	GPM
Daily Avg:	10.130	0.000	14.985
Daily Min:	8.024	0	10.932
Daily Max:	12.454	0	19.553
Peak to Avg:			1.30

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/27/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Thursday - A.M. 7/27/2023

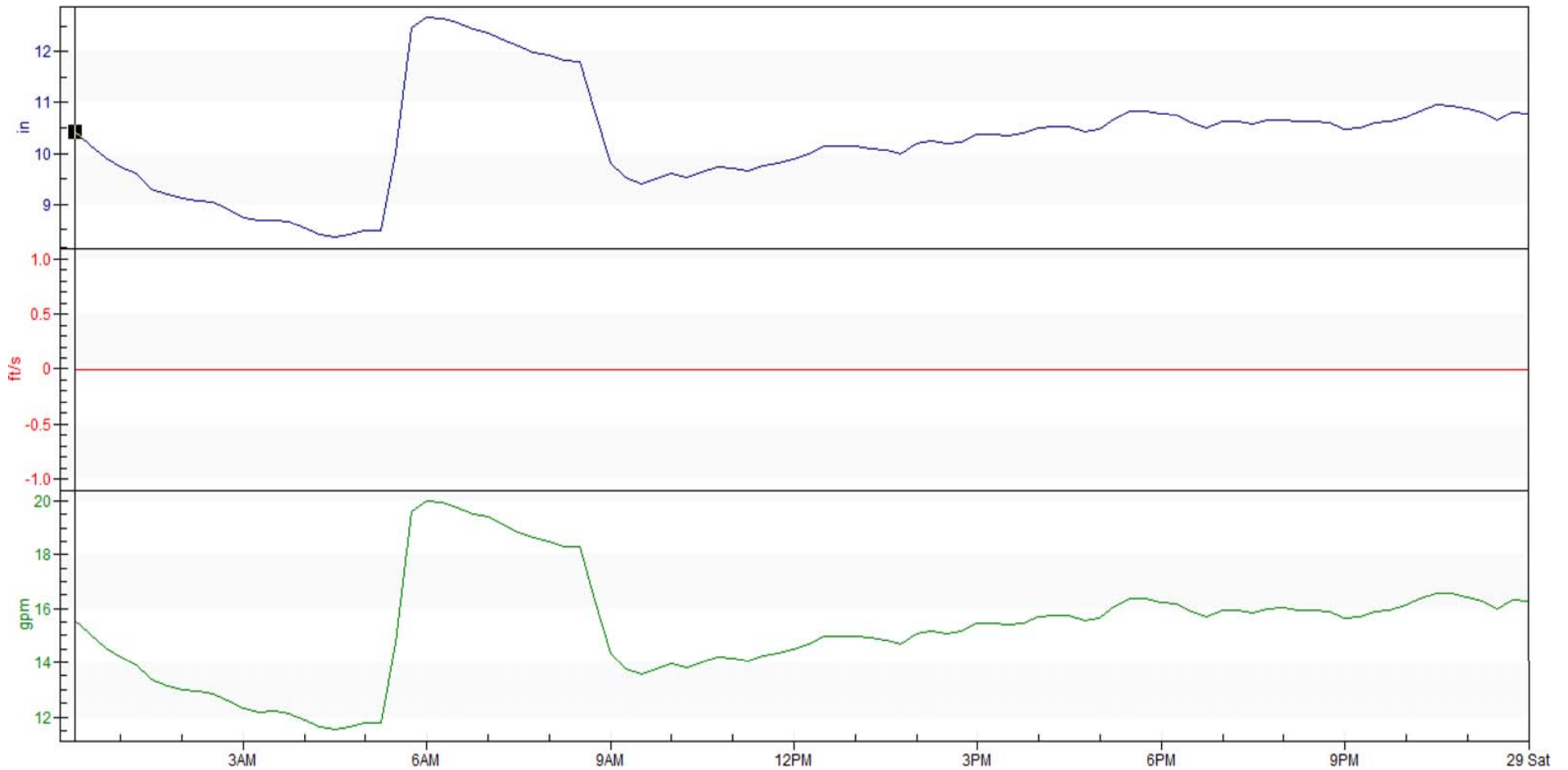
Time	Level	Velocity	Flow
12:00:00 AM	10.457	0	15.609
12:15:00 AM	10.138	0	14.984
12:30:00 AM	9.928	0	14.573
12:45:00 AM	9.851	0	14.423
1:00:00 AM	9.678	0	14.087
1:15:00 AM	9.395	0	13.538
1:30:00 AM	9.324	0	13.401
1:45:00 AM	9.204	0	13.171
2:00:00 AM	8.996	0	12.771
2:15:00 AM	8.823	0	12.441
2:30:00 AM	8.684	0	12.175
2:45:00 AM	8.563	0	11.946
3:00:00 AM	8.495	0	11.816
3:15:00 AM	8.374	0	11.589
3:30:00 AM	8.199	0	11.259
3:45:00 AM	8.131	0	11.131
4:00:00 AM	8.061	0	11
4:15:00 AM	8.02	0	10.924
4:30:00 AM	7.962	0	10.815
4:45:00 AM	8.006	0	10.897
5:00:00 AM	8.102	0	11.076
5:15:00 AM	8.272	0	11.396
5:30:00 AM	8.57	0	11.96
5:45:00 AM	8.71	0	12.225
6:00:00 AM	8.795	0	12.387
6:15:00 AM	8.901	0	12.588
6:30:00 AM	8.928	0	12.642
6:45:00 AM	8.908	0	12.603
7:00:00 AM	8.852	0	12.496
7:15:00 AM	12.099	0	18.851
7:30:00 AM	12.579	0	19.8
7:45:00 AM	12.641	0	19.923
8:00:00 AM	12.588	0	19.818
8:15:00 AM	12.5	0	19.643
8:30:00 AM	12.375	0	19.396
8:45:00 AM	12.328	0	19.303
9:00:00 AM	12.252	0	19.153
9:15:00 AM	12.126	0	18.903
9:30:00 AM	12.002	0	18.659
9:45:00 AM	11.83	0	18.318
10:00:00 AM	11.681	0	18.022
10:15:00 AM	11.163	0	17
10:30:00 AM	9.842	0	14.406
10:45:00 AM	9.396	0	13.54
11:00:00 AM	9.495	0	13.733
11:15:00 AM	9.638	0	14.009
11:30:00 AM	9.696	0	14.122
11:45:00 AM	9.76	0	14.246

Thursday - P.M. 7/27/2023

Time	Level	Velocity	Flow
12:00:00 PM	9.716	0	14.161
12:15:00 PM	9.85	0	14.421
12:30:00 PM	9.883	0	14.486
12:45:00 PM	10	0	14.715
1:00:00 PM	10.039	0	14.79
1:15:00 PM	9.945	0	14.607
1:30:00 PM	9.837	0	14.397
1:45:00 PM	9.911	0	14.54
2:00:00 PM	9.908	0	14.534
2:15:00 PM	9.871	0	14.463
2:30:00 PM	10.016	0	14.745
2:45:00 PM	10.022	0	14.757
3:00:00 PM	9.977	0	14.669
3:15:00 PM	9.909	0	14.537
3:30:00 PM	10.016	0	14.744
3:45:00 PM	10.201	0	15.106
4:00:00 PM	10.287	0	15.275
4:15:00 PM	10.297	0	15.295
4:30:00 PM	10.351	0	15.402
4:45:00 PM	10.427	0	15.55
5:00:00 PM	10.523	0	15.739
5:15:00 PM	10.526	0	15.744
5:30:00 PM	10.592	0	15.874
5:45:00 PM	10.743	0	16.172
6:00:00 PM	10.678	0	16.043
6:15:00 PM	10.506	0	15.706
6:30:00 PM	10.506	0	15.705
6:45:00 PM	10.645	0	15.977
7:00:00 PM	10.67	0	16.027
7:15:00 PM	10.681	0	16.05
7:30:00 PM	10.704	0	16.094
7:45:00 PM	10.65	0	15.988
8:00:00 PM	10.573	0	15.837
8:15:00 PM	10.586	0	15.862
8:30:00 PM	10.644	0	15.976
8:45:00 PM	10.717	0	16.12
9:00:00 PM	10.703	0	16.093
9:15:00 PM	10.606	0	15.902
9:30:00 PM	10.607	0	15.903
9:45:00 PM	10.789	0	16.262
10:00:00 PM	11.099	0	16.873
10:15:00 PM	11.264	0	17.197
10:30:00 PM	11.258	0	17.187
10:45:00 PM	11.358	0	17.384
11:00:00 PM	11.357	0	17.382
11:15:00 PM	11.132	0	16.938
11:30:00 PM	10.96	0	16.599
11:45:00 PM	10.803	0	16.288

	Inches	Feet/Sec	GPM
Daily Avg:	10.150	0.000	15.024
Daily Min:	7.962	0	10.815
Daily Max:	12.641	0	19.923
Peak to Avg:			1.33

MAXIMUM DAILY FLOW DATA



Maximum Level —

Maximum Velocity —

Maximum Flow Rate —

Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/28/2023, 12:00 a.m. - 12:00 p.m.**

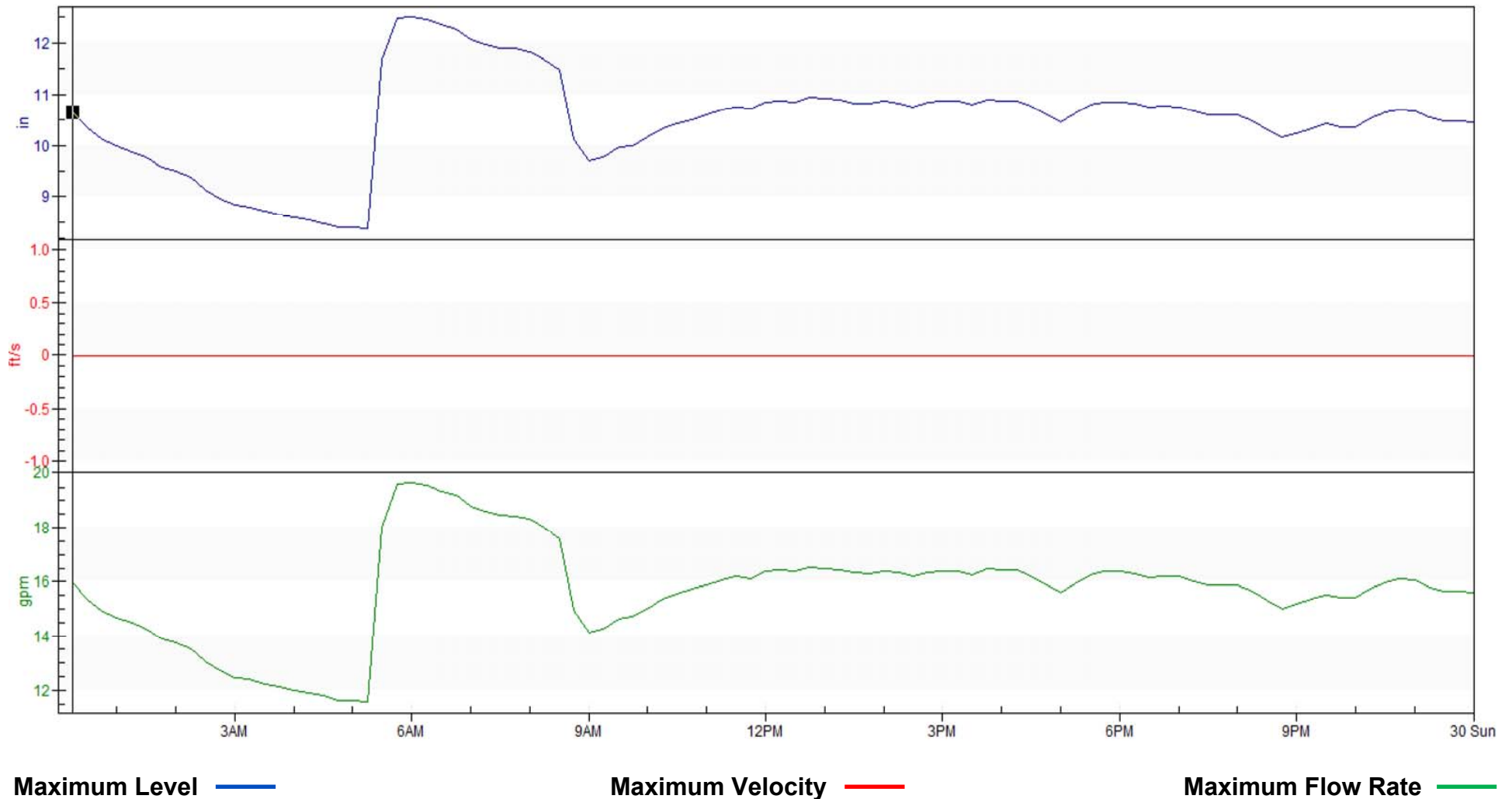
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Friday - A.M. 7/28/2023

Friday - P.M. 7/28/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	10.578	0	15.847	12:00:00 PM	9.885	0	14.49
12:15:00 AM	10.432	0	15.56	12:15:00 PM	9.986	0	14.687
12:30:00 AM	10.175	0	15.057	12:30:00 PM	10.143	0	14.993
12:45:00 AM	9.902	0	14.523	12:45:00 PM	10.141	0	14.99
1:00:00 AM	9.739	0	14.206	1:00:00 PM	10.139	0	14.986
1:15:00 AM	9.596	0	13.928	1:15:00 PM	10.102	0	14.914
1:30:00 AM	9.312	0	13.379	1:30:00 PM	10.057	0	14.825
1:45:00 AM	9.188	0	13.14	1:45:00 PM	9.99	0	14.694
2:00:00 AM	9.122	0	13.012	2:00:00 PM	10.186	0	15.077
2:15:00 AM	9.082	0	12.937	2:15:00 PM	10.239	0	15.182
2:30:00 AM	9.045	0	12.864	2:30:00 PM	10.185	0	15.076
2:45:00 AM	8.907	0	12.6	2:45:00 PM	10.221	0	15.147
3:00:00 AM	8.752	0	12.306	3:00:00 PM	10.368	0	15.435
3:15:00 AM	8.686	0	12.179	3:15:00 PM	10.368	0	15.434
3:30:00 AM	8.699	0	12.204	3:30:00 PM	10.353	0	15.405
3:45:00 AM	8.657	0	12.124	3:45:00 PM	10.389	0	15.475
4:00:00 AM	8.527	0	11.877	4:00:00 PM	10.498	0	15.689
4:15:00 AM	8.4	0	11.637	4:15:00 PM	10.517	0	15.727
4:30:00 AM	8.356	0	11.554	4:30:00 PM	10.526	0	15.744
4:45:00 AM	8.406	0	11.649	4:45:00 PM	10.421	0	15.538
5:00:00 AM	8.476	0	11.78	5:00:00 PM	10.466	0	15.627
5:15:00 AM	8.473	0	11.776	5:15:00 PM	10.689	0	16.064
5:30:00 AM	10.007	0	14.728	5:30:00 PM	10.84	0	16.362
5:45:00 AM	12.476	0	19.597	5:45:00 PM	10.844	0	16.369
6:00:00 AM	12.671	0	19.982	6:00:00 PM	10.769	0	16.222
6:15:00 AM	12.657	0	19.954	6:15:00 PM	10.753	0	16.191
6:30:00 AM	12.56	0	19.763	6:30:00 PM	10.599	0	15.888
6:45:00 AM	12.442	0	19.529	6:45:00 PM	10.496	0	15.685
7:00:00 AM	12.377	0	19.399	7:00:00 PM	10.623	0	15.934
7:15:00 AM	12.238	0	19.126	7:15:00 PM	10.63	0	15.949
7:30:00 AM	12.1	0	18.853	7:30:00 PM	10.572	0	15.834
7:45:00 AM	11.993	0	18.641	7:45:00 PM	10.653	0	15.994
8:00:00 AM	11.925	0	18.505	8:00:00 PM	10.666	0	16.02
8:15:00 AM	11.832	0	18.321	8:15:00 PM	10.627	0	15.943
8:30:00 AM	11.813	0	18.283	8:30:00 PM	10.628	0	15.945
8:45:00 AM	10.831	0	16.343	8:45:00 PM	10.612	0	15.913
9:00:00 AM	9.805	0	14.334	9:00:00 PM	10.479	0	15.653
9:15:00 AM	9.523	0	13.786	9:15:00 PM	10.511	0	15.715
9:30:00 AM	9.415	0	13.577	9:30:00 PM	10.611	0	15.911
9:45:00 AM	9.517	0	13.774	9:45:00 PM	10.633	0	15.955
10:00:00 AM	9.611	0	13.956	10:00:00 PM	10.713	0	16.112
10:15:00 AM	9.527	0	13.795	10:15:00 PM	10.839	0	16.359
10:30:00 AM	9.633	0	14	10:30:00 PM	10.953	0	16.585
10:45:00 AM	9.725	0	14.178	10:45:00 PM	10.931	0	16.542
11:00:00 AM	9.716	0	14.161	11:00:00 PM	10.872	0	16.424
11:15:00 AM	9.656	0	14.044	11:15:00 PM	10.801	0	16.284
11:30:00 AM	9.765	0	14.256	11:30:00 PM	10.649	0	15.986
11:45:00 AM	9.804	0	14.333	11:45:00 PM	10.814	0	16.31
				Inches	Feet/Sec	GPM	
				Daily Avg:	10.290	0.000	15.293
				Daily Min:	8.356	0	11.554
				Daily Max:	12.671	0	19.982
				Peak to Avg:			1.31

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/29/2023, 12:00 a.m. - 12:00 p.m.**

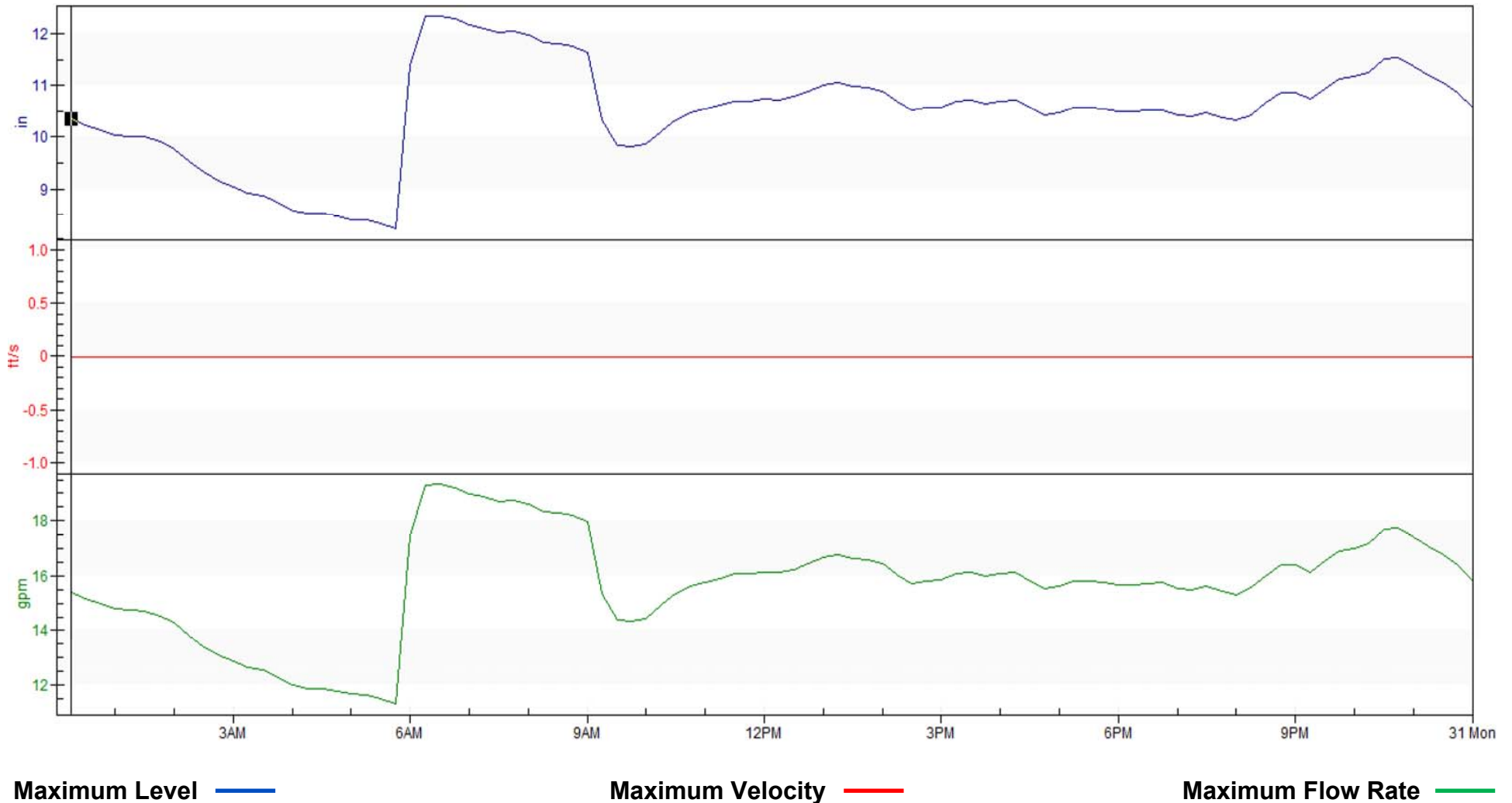
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Saturday - A.M. 7/29/2023

Saturday - P.M. 7/29/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	10.788	0	16.26	12:00:00 PM	10.853	0	16.387
12:15:00 AM	10.638	0	15.965	12:15:00 PM	10.871	0	16.423
12:30:00 AM	10.343	0	15.386	12:30:00 PM	10.85	0	16.381
12:45:00 AM	10.107	0	14.923	12:45:00 PM	10.931	0	16.541
1:00:00 AM	9.984	0	14.682	1:00:00 PM	10.909	0	16.498
1:15:00 AM	9.878	0	14.477	1:15:00 PM	10.885	0	16.45
1:30:00 AM	9.76	0	14.246	1:30:00 PM	10.825	0	16.333
1:45:00 AM	9.578	0	13.893	1:45:00 PM	10.815	0	16.312
2:00:00 AM	9.502	0	13.747	2:00:00 PM	10.857	0	16.395
2:15:00 AM	9.387	0	13.524	2:15:00 PM	10.828	0	16.337
2:30:00 AM	9.143	0	13.054	2:30:00 PM	10.748	0	16.181
2:45:00 AM	8.969	0	12.72	2:45:00 PM	10.833	0	16.348
3:00:00 AM	8.838	0	12.469	3:00:00 PM	10.858	0	16.397
3:15:00 AM	8.799	0	12.394	3:15:00 PM	10.859	0	16.399
3:30:00 AM	8.723	0	12.249	3:30:00 PM	10.792	0	16.268
3:45:00 AM	8.652	0	12.114	3:45:00 PM	10.89	0	16.461
4:00:00 AM	8.589	0	11.996	4:00:00 PM	10.873	0	16.427
4:15:00 AM	8.544	0	11.909	4:15:00 PM	10.87	0	16.42
4:30:00 AM	8.481	0	11.791	4:30:00 PM	10.759	0	16.203
4:45:00 AM	8.391	0	11.62	4:45:00 PM	10.59	0	15.87
5:00:00 AM	8.398	0	11.634	5:00:00 PM	10.46	0	15.614
5:15:00 AM	8.376	0	11.592	5:15:00 PM	10.617	0	15.923
5:30:00 AM	11.682	0	18.025	5:30:00 PM	10.785	0	16.254
5:45:00 AM	12.484	0	19.611	5:45:00 PM	10.846	0	16.374
6:00:00 AM	12.505	0	19.654	6:00:00 PM	10.853	0	16.388
6:15:00 AM	12.458	0	19.561	6:15:00 PM	10.809	0	16.301
6:30:00 AM	12.352	0	19.351	6:30:00 PM	10.734	0	16.153
6:45:00 AM	12.269	0	19.187	6:45:00 PM	10.76	0	16.204
7:00:00 AM	12.06	0	18.773	7:00:00 PM	10.747	0	16.18
7:15:00 AM	11.965	0	18.586	7:15:00 PM	10.663	0	16.014
7:30:00 AM	11.898	0	18.452	7:30:00 PM	10.589	0	15.868
7:45:00 AM	11.891	0	18.439	7:45:00 PM	10.598	0	15.886
8:00:00 AM	11.829	0	18.316	8:00:00 PM	10.591	0	15.872
8:15:00 AM	11.674	0	18.009	8:15:00 PM	10.475	0	15.643
8:30:00 AM	11.47	0	17.605	8:30:00 PM	10.301	0	15.302
8:45:00 AM	10.121	0	14.95	8:45:00 PM	10.155	0	15.018
9:00:00 AM	9.692	0	14.114	9:00:00 PM	10.235	0	15.174
9:15:00 AM	9.759	0	14.244	9:15:00 PM	10.341	0	15.381
9:30:00 AM	9.954	0	14.624	9:30:00 PM	10.417	0	15.53
9:45:00 AM	9.995	0	14.705	9:45:00 PM	10.358	0	15.414
10:00:00 AM	10.152	0	15.012	10:00:00 PM	10.363	0	15.425
10:15:00 AM	10.325	0	15.35	10:15:00 PM	10.525	0	15.742
10:30:00 AM	10.433	0	15.561	10:30:00 PM	10.637	0	15.963
10:45:00 AM	10.513	0	15.719	10:45:00 PM	10.703	0	16.092
11:00:00 AM	10.59	0	15.87	11:00:00 PM	10.682	0	16.052
11:15:00 AM	10.695	0	16.076	11:15:00 PM	10.558	0	15.806
11:30:00 AM	10.757	0	16.199	11:30:00 PM	10.486	0	15.666
11:45:00 AM	10.716	0	16.118	11:45:00 PM	10.477	0	15.648
				Inches	Feet/Sec	GPM	
Daily Avg:				10.482	0.000	15.668	
Daily Min:				8.376	0	11.592	
Daily Max:				12.505	0	19.654	
Peak to Avg:						1.25	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/30/2023, 12:00 a.m. - 12:00 p.m.**

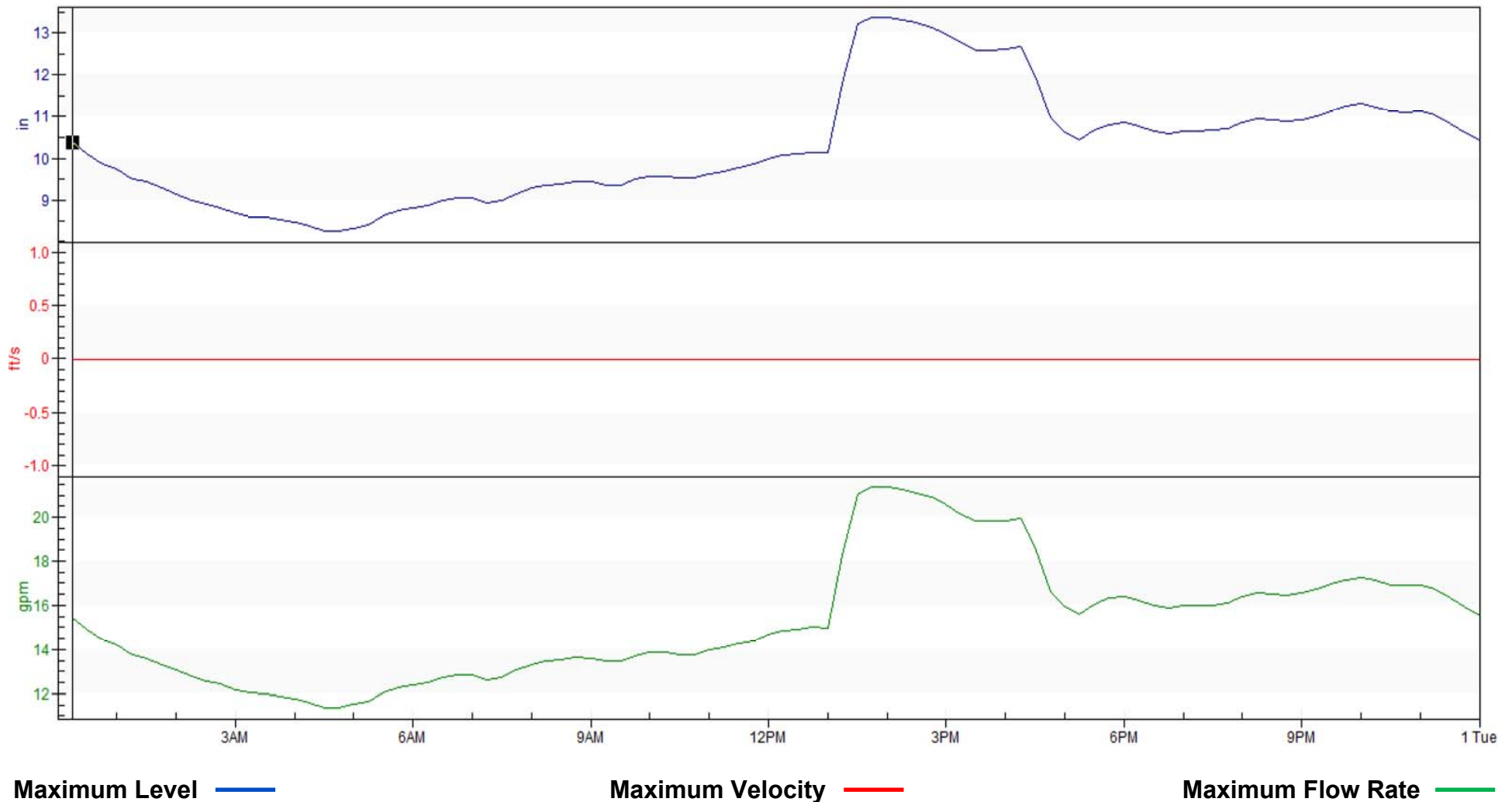
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Sunday - A.M. 7/30/2023

Sunday - P.M. 7/30/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow																				
12:00:00 AM	10.456	0	15.608	12:00:00 PM	10.732	0	16.15																				
12:15:00 AM	10.341	0	15.382	12:15:00 PM	10.719	0	16.124																				
12:30:00 AM	10.232	0	15.167	12:30:00 PM	10.78	0	16.243																				
12:45:00 AM	10.135	0	14.977	12:45:00 PM	10.875	0	16.432																				
1:00:00 AM	10.041	0	14.794	1:00:00 PM	11.002	0	16.682																				
1:15:00 AM	10.02	0	14.753	1:15:00 PM	11.048	0	16.773																				
1:30:00 AM	9.999	0	14.713	1:30:00 PM	10.988	0	16.654																				
1:45:00 AM	9.903	0	14.526	1:45:00 PM	10.946	0	16.571																				
2:00:00 AM	9.774	0	14.273	2:00:00 PM	10.892	0	16.464																				
2:15:00 AM	9.516	0	13.773	2:15:00 PM	10.683	0	16.052																				
2:30:00 AM	9.318	0	13.39	2:30:00 PM	10.513	0	15.719																				
2:45:00 AM	9.163	0	13.091	2:45:00 PM	10.562	0	15.815																				
3:00:00 AM	9.042	0	12.859	3:00:00 PM	10.572	0	15.835																				
3:15:00 AM	8.926	0	12.636	3:15:00 PM	10.694	0	16.074																				
3:30:00 AM	8.871	0	12.532	3:30:00 PM	10.712	0	16.11																				
3:45:00 AM	8.733	0	12.268	3:45:00 PM	10.65	0	15.989																				
4:00:00 AM	8.582	0	11.983	4:00:00 PM	10.688	0	16.064																				
4:15:00 AM	8.519	0	11.863	4:15:00 PM	10.714	0	16.114																				
4:30:00 AM	8.514	0	11.853	4:30:00 PM	10.569	0	15.829																				
4:45:00 AM	8.475	0	11.78	4:45:00 PM	10.421	0	15.539																				
5:00:00 AM	8.413	0	11.662	5:00:00 PM	10.463	0	15.621																				
5:15:00 AM	8.397	0	11.631	5:15:00 PM	10.566	0	15.823																				
5:30:00 AM	8.335	0	11.514	5:30:00 PM	10.565	0	15.82																				
5:45:00 AM	8.234	0	11.324	5:45:00 PM	10.536	0	15.763																				
6:00:00 AM	11.406	0	17.479	6:00:00 PM	10.486	0	15.665																				
6:15:00 AM	12.331	0	19.31	6:15:00 PM	10.488	0	15.67																				
6:30:00 AM	12.343	0	19.332	6:30:00 PM	10.513	0	15.718																				
6:45:00 AM	12.288	0	19.225	6:45:00 PM	10.528	0	15.748																				
7:00:00 AM	12.169	0	18.99	7:00:00 PM	10.413	0	15.521																				
7:15:00 AM	12.105	0	18.861	7:15:00 PM	10.406	0	15.508																				
7:30:00 AM	12.032	0	18.717	7:30:00 PM	10.467	0	15.629																				
7:45:00 AM	12.045	0	18.742	7:45:00 PM	10.379	0	15.456																				
8:00:00 AM	11.984	0	18.622	8:00:00 PM	10.313	0	15.326																				
8:15:00 AM	11.837	0	18.331	8:15:00 PM	10.434	0	15.563																				
8:30:00 AM	11.811	0	18.279	8:30:00 PM	10.654	0	15.995																				
8:45:00 AM	11.76	0	18.179	8:45:00 PM	10.854	0	16.389																				
9:00:00 AM	11.644	0	17.949	9:00:00 PM	10.852	0	16.386																				
9:15:00 AM	10.326	0	15.351	9:15:00 PM	10.732	0	16.15																				
9:30:00 AM	9.84	0	14.402	9:30:00 PM	10.934	0	16.547																				
9:45:00 AM	9.818	0	14.359	9:45:00 PM	11.125	0	16.925																				
10:00:00 AM	9.86	0	14.442	10:00:00 PM	11.172	0	17.016																				
10:15:00 AM	10.108	0	14.925	10:15:00 PM	11.251	0	17.173																				
10:30:00 AM	10.32	0	15.34	10:30:00 PM	11.519	0	17.703																				
10:45:00 AM	10.469	0	15.632	10:45:00 PM	11.545	0	17.753																				
11:00:00 AM	10.537	0	15.765	11:00:00 PM	11.374	0	17.417																				
11:15:00 AM	10.609	0	15.906	11:15:00 PM	11.205	0	17.082																				
11:30:00 AM	10.692	0	16.07	11:30:00 PM	11.06	0	16.795																				
11:45:00 AM	10.694	0	16.075	11:45:00 PM	10.855	0	16.392																				
				<table><tr><th></th><th>Inches</th><th>Feet/Sec</th><th>GPM</th></tr><tr><td>Daily Avg:</td><td>10.494</td><td>0.000</td><td>15.693</td></tr><tr><td>Daily Min:</td><td>8.234</td><td>0</td><td>11.324</td></tr><tr><td>Daily Max:</td><td>12.343</td><td>0</td><td>19.332</td></tr><tr><td>Peak to Avg:</td><td></td><td></td><td>1.23</td></tr></table>					Inches	Feet/Sec	GPM	Daily Avg:	10.494	0.000	15.693	Daily Min:	8.234	0	11.324	Daily Max:	12.343	0	19.332	Peak to Avg:			1.23
	Inches	Feet/Sec	GPM																								
Daily Avg:	10.494	0.000	15.693																								
Daily Min:	8.234	0	11.324																								
Daily Max:	12.343	0	19.332																								
Peak to Avg:			1.23																								

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**
Location: **MH-7033**
Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**
Time Period: **7/30/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Monday - A.M. 7/31/2023

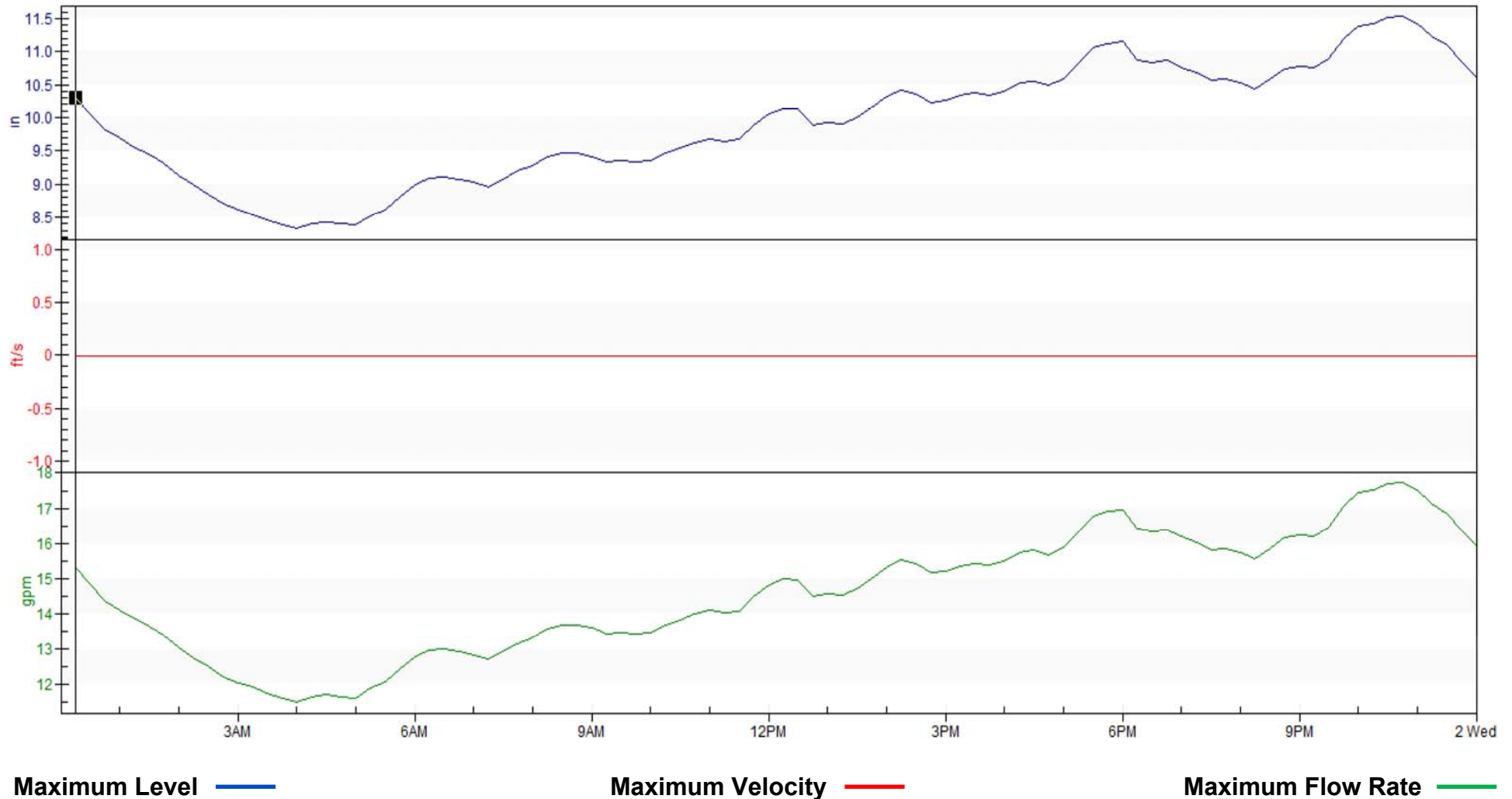
Time	Level	Velocity	Velocity
12:10:00 AM	10.563	0	15.816
12:15:00 AM	10.366	0	15.43
12:30:00 AM	10.108	0	14.925
12:45:00 AM	9.869	0	14.458
1:00:00 AM	9.744	0	14.216
1:15:00 AM	9.504	0	13.75
1:30:00 AM	9.427	0	13.6
1:45:00 AM	9.291	0	13.338
2:00:00 AM	9.143	0	13.053
2:15:00 AM	8.998	0	12.775
2:30:00 AM	8.902	0	12.591
2:45:00 AM	8.815	0	12.424
3:00:00 AM	8.686	0	12.178
3:15:00 AM	8.606	0	12.026
3:30:00 AM	8.597	0	12.01
3:45:00 AM	8.537	0	11.897
4:00:00 AM	8.477	0	11.784
4:15:00 AM	8.379	0	11.597
4:30:00 AM	8.262	0	11.377
4:45:00 AM	8.27	0	11.392
5:00:00 AM	8.331	0	11.508
5:15:00 AM	8.413	0	11.662
5:30:00 AM	8.623	0	12.059
5:45:00 AM	8.745	0	12.292
6:00:00 AM	8.806	0	12.409
6:15:00 AM	8.869	0	12.529
6:30:00 AM	8.991	0	12.761
6:45:00 AM	9.052	0	12.879
7:00:00 AM	9.038	0	12.852
7:15:00 AM	8.917	0	12.62
7:30:00 AM	8.977	0	12.734
7:45:00 AM	9.145	0	13.056
8:00:00 AM	9.286	0	13.329
8:15:00 AM	9.361	0	13.474
8:30:00 AM	9.394	0	13.538
8:45:00 AM	9.456	0	13.657
9:00:00 AM	9.432	0	13.611
9:15:00 AM	9.355	0	13.461
9:30:00 AM	9.366	0	13.483
9:45:00 AM	9.49	0	13.723
10:00:00 AM	9.561	0	13.86
10:15:00 AM	9.564	0	13.865
10:30:00 AM	9.523	0	13.786
10:45:00 AM	9.519	0	13.778
11:00:00 AM	9.627	0	13.987
11:15:00 AM	9.691	0	14.113
11:30:00 AM	9.774	0	14.273
11:45:00 AM	9.85	0	14.422

Monday - P.M. 7/31/2023

Time	Level	Velocity	Flow
12:00:00 PM	9.987	0	14.689
12:15:00 PM	10.065	0	14.842
12:30:00 PM	10.106	0	14.922
12:45:00 PM	10.145	0	14.998
1:00:00 PM	10.141	0	14.989
1:15:00 PM	11.804	0	18.267
1:30:00 PM	13.214	0	21.053
1:45:00 PM	13.364	0	21.349
2:00:00 PM	13.372	0	21.363
2:15:00 PM	13.315	0	21.252
2:30:00 PM	13.239	0	21.102
2:45:00 PM	13.14	0	20.908
3:00:00 PM	12.983	0	20.599
3:15:00 PM	12.751	0	20.14
3:30:00 PM	12.599	0	19.839
3:45:00 PM	12.591	0	19.824
4:00:00 PM	12.608	0	19.856
4:15:00 PM	12.663	0	19.966
4:30:00 PM	11.993	0	18.641
4:45:00 PM	10.977	0	16.631
5:00:00 PM	10.633	0	15.954
5:15:00 PM	10.45	0	15.595
5:30:00 PM	10.684	0	16.055
5:45:00 PM	10.816	0	16.315
6:00:00 PM	10.867	0	16.415
6:15:00 PM	10.757	0	16.199
6:30:00 PM	10.661	0	16.01
6:45:00 PM	10.585	0	15.86
7:00:00 PM	10.655	0	15.997
7:15:00 PM	10.654	0	15.996
7:30:00 PM	10.667	0	16.022
7:45:00 PM	10.708	0	16.101
8:00:00 PM	10.848	0	16.377
8:15:00 PM	10.954	0	16.586
8:30:00 PM	10.908	0	16.495
8:45:00 PM	10.884	0	16.448
9:00:00 PM	10.934	0	16.547
9:15:00 PM	11.025	0	16.727
9:30:00 PM	11.136	0	16.946
9:45:00 PM	11.245	0	17.16
10:00:00 PM	11.301	0	17.271
10:15:00 PM	11.232	0	17.135
10:30:00 PM	11.121	0	16.917
10:45:00 PM	11.109	0	16.892
11:00:00 PM	11.126	0	16.926
11:15:00 PM	11.042	0	16.76
11:30:00 PM	10.823	0	16.329
11:45:00 PM	10.614	0	15.916

	Inches	Feet/Sec	GPM
Daily Avg:	10.270	0.000	15.260
Daily Min:	8.262	0	11.377
Daily Max:	13.372	0	21.363
Peak to Avg:			1.40

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/1/2023, 12:00 a.m. - 12:00 p.m.**

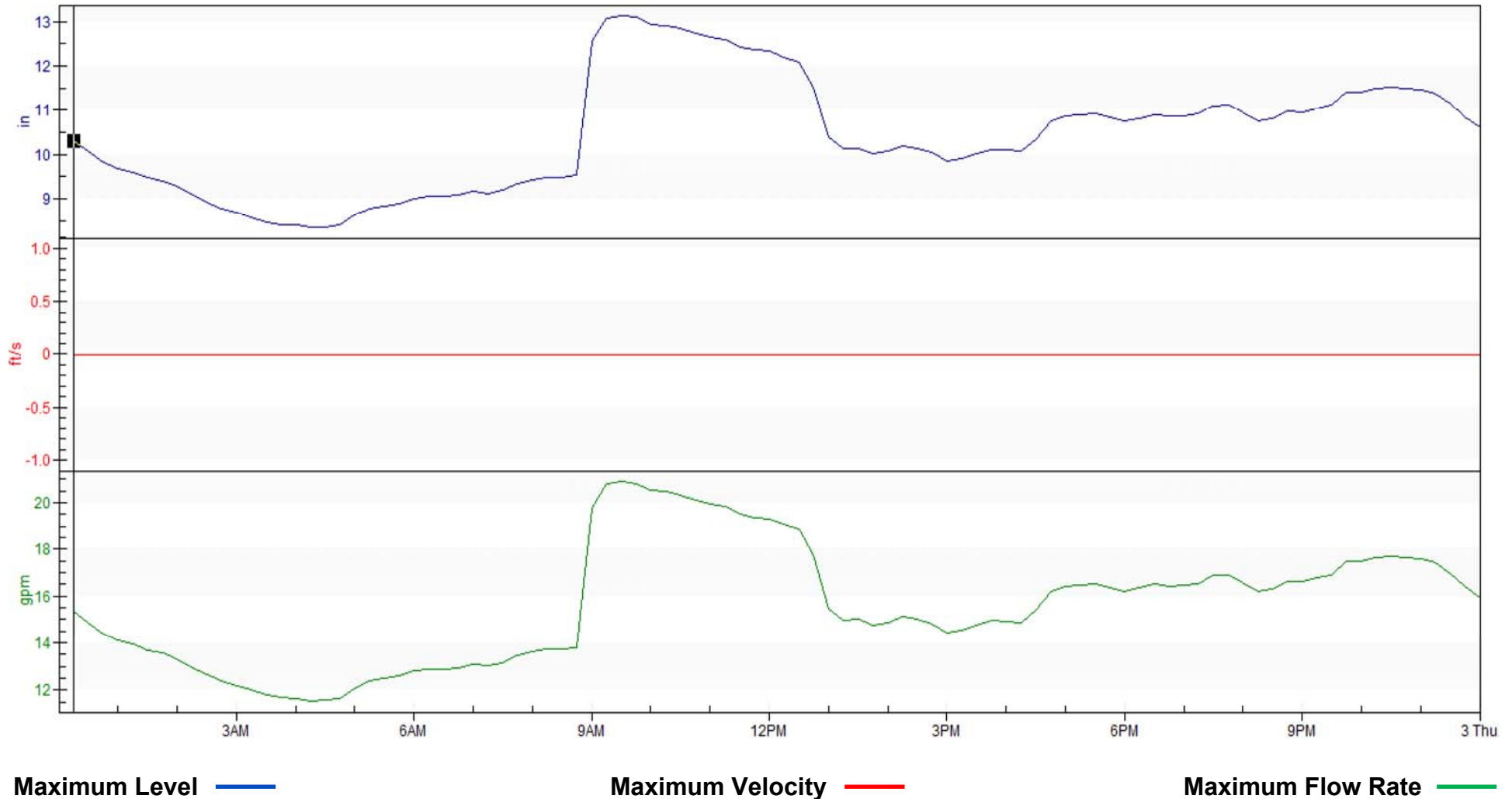
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Tuesday- A.M. 8/1/2023

Tuesday- P.M. 8/1/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	10.429	0	15.554	12:00:00 PM	10.062	0	14.834
12:15:00 AM	10.303	0	15.306	12:15:00 PM	10.139	0	14.985
12:30:00 AM	10.066	0	14.843	12:30:00 PM	10.132	0	14.972
12:45:00 AM	9.815	0	14.354	12:45:00 PM	9.893	0	14.506
1:00:00 AM	9.689	0	14.109	1:00:00 PM	9.927	0	14.573
1:15:00 AM	9.553	0	13.845	1:15:00 PM	9.913	0	14.544
1:30:00 AM	9.447	0	13.639	1:30:00 PM	10.008	0	14.729
1:45:00 AM	9.315	0	13.385	1:45:00 PM	10.152	0	15.012
2:00:00 AM	9.134	0	13.036	2:00:00 PM	10.315	0	15.331
2:15:00 AM	8.987	0	12.755	2:15:00 PM	10.414	0	15.524
2:30:00 AM	8.845	0	12.483	2:30:00 PM	10.368	0	15.434
2:45:00 AM	8.71	0	12.224	2:45:00 PM	10.236	0	15.174
3:00:00 AM	8.616	0	12.046	3:00:00 PM	10.26	0	15.223
3:15:00 AM	8.549	0	11.919	3:15:00 PM	10.334	0	15.367
3:30:00 AM	8.469	0	11.767	3:30:00 PM	10.37	0	15.438
3:45:00 AM	8.392	0	11.621	3:45:00 PM	10.35	0	15.399
4:00:00 AM	8.333	0	11.51	4:00:00 PM	10.398	0	15.492
4:15:00 AM	8.413	0	11.661	4:15:00 PM	10.524	0	15.74
4:30:00 AM	8.437	0	11.707	4:30:00 PM	10.555	0	15.8
4:45:00 AM	8.403	0	11.642	4:45:00 PM	10.499	0	15.69
5:00:00 AM	8.389	0	11.617	5:00:00 PM	10.593	0	15.875
5:15:00 AM	8.532	0	11.887	5:15:00 PM	10.823	0	16.329
5:30:00 AM	8.622	0	12.058	5:30:00 PM	11.061	0	16.798
5:45:00 AM	8.816	0	12.427	5:45:00 PM	11.116	0	16.905
6:00:00 AM	9.001	0	12.781	6:00:00 PM	11.148	0	16.969
6:15:00 AM	9.093	0	12.957	6:15:00 PM	10.875	0	16.432
6:30:00 AM	9.11	0	12.99	6:30:00 PM	10.837	0	16.357
6:45:00 AM	9.072	0	12.918	6:45:00 PM	10.862	0	16.406
7:00:00 AM	9.031	0	12.838	7:00:00 PM	10.759	0	16.202
7:15:00 AM	8.968	0	12.718	7:15:00 PM	10.673	0	16.034
7:30:00 AM	9.074	0	12.92	7:30:00 PM	10.572	0	15.834
7:45:00 AM	9.196	0	13.156	7:45:00 PM	10.583	0	15.857
8:00:00 AM	9.274	0	13.305	8:00:00 PM	10.532	0	15.755
8:15:00 AM	9.405	0	13.558	8:15:00 PM	10.444	0	15.583
8:30:00 AM	9.463	0	13.67	8:30:00 PM	10.583	0	15.856
8:45:00 AM	9.464	0	13.673	8:45:00 PM	10.737	0	16.16
9:00:00 AM	9.421	0	13.59	9:00:00 PM	10.782	0	16.248
9:15:00 AM	9.33	0	13.414	9:15:00 PM	10.764	0	16.212
9:30:00 AM	9.363	0	13.476	9:30:00 PM	10.895	0	16.47
9:45:00 AM	9.344	0	13.441	9:45:00 PM	11.202	0	17.076
10:00:00 AM	9.355	0	13.462	10:00:00 PM	11.388	0	17.443
10:15:00 AM	9.473	0	13.689	10:15:00 PM	11.43	0	17.527
10:30:00 AM	9.538	0	13.816	10:30:00 PM	11.519	0	17.702
10:45:00 AM	9.626	0	13.985	10:45:00 PM	11.536	0	17.735
11:00:00 AM	9.679	0	14.09	11:00:00 PM	11.425	0	17.516
11:15:00 AM	9.649	0	14.031	11:15:00 PM	11.228	0	17.128
11:30:00 AM	9.675	0	14.081	11:30:00 PM	11.097	0	16.869
11:45:00 AM	9.886	0	14.491	11:45:00 PM	10.851	0	16.384
				Inches	Feet/Sec	GPM	
				Daily Avg:	9.910	0.000	14.551
				Daily Min:	8.333	0	11.51
				Daily Max:	11.536	0	17.735
				Peak to Avg:			1.22

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/2/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

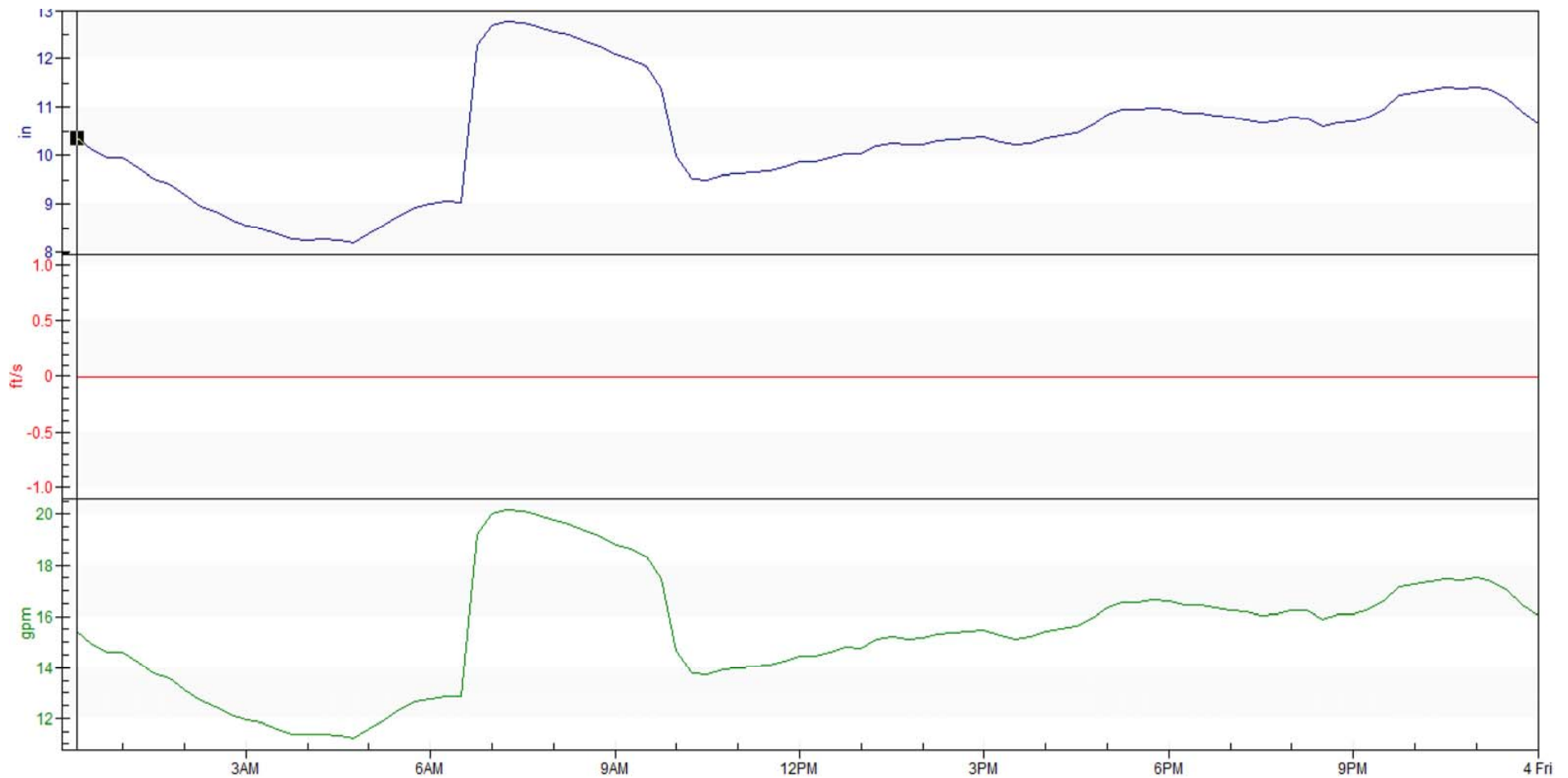
Wednesday - A.M. 8/2/2023

Wednesday - P.M. 8/2/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	10.611	0	15.912	12:00:00 PM	12.329	0	19.305
12:15:00 AM	10.316	0	15.333	12:15:00 PM	12.205	0	19.06
12:30:00 AM	10.081	0	14.872	12:30:00 PM	12.098	0	18.847
12:45:00 AM	9.827	0	14.376	12:45:00 PM	11.535	0	17.734
1:00:00 AM	9.694	0	14.118	1:00:00 PM	10.38	0	15.458
1:15:00 AM	9.593	0	13.922	1:15:00 PM	10.136	0	14.979
1:30:00 AM	9.477	0	13.697	1:30:00 PM	10.146	0	15
1:45:00 AM	9.406	0	13.561	1:45:00 PM	10.03	0	14.773
2:00:00 AM	9.278	0	13.312	2:00:00 PM	10.085	0	14.88
2:15:00 AM	9.077	0	12.927	2:15:00 PM	10.199	0	15.104
2:30:00 AM	8.926	0	12.638	2:30:00 PM	10.146	0	14.999
2:45:00 AM	8.791	0	12.378	2:45:00 PM	10.055	0	14.822
3:00:00 AM	8.693	0	12.192	3:00:00 PM	9.856	0	14.434
3:15:00 AM	8.591	0	11.999	3:15:00 PM	9.918	0	14.555
3:30:00 AM	8.481	0	11.79	3:30:00 PM	10.03	0	14.772
3:45:00 AM	8.419	0	11.674	3:45:00 PM	10.121	0	14.95
4:00:00 AM	8.409	0	11.654	4:00:00 PM	10.097	0	14.903
4:15:00 AM	8.354	0	11.55	4:15:00 PM	10.075	0	14.861
4:30:00 AM	8.364	0	11.569	4:30:00 PM	10.333	0	15.366
4:45:00 AM	8.418	0	11.67	4:45:00 PM	10.744	0	16.173
5:00:00 AM	8.638	0	12.088	5:00:00 PM	10.867	0	16.415
5:15:00 AM	8.791	0	12.379	5:15:00 PM	10.901	0	16.483
5:30:00 AM	8.85	0	12.491	5:30:00 PM	10.922	0	16.524
5:45:00 AM	8.898	0	12.584	5:45:00 PM	10.835	0	16.352
6:00:00 AM	9.012	0	12.802	6:00:00 PM	10.755	0	16.194
6:15:00 AM	9.061	0	12.896	6:15:00 PM	10.828	0	16.338
6:30:00 AM	9.061	0	12.897	6:30:00 PM	10.905	0	16.491
6:45:00 AM	9.089	0	12.949	6:45:00 PM	10.868	0	16.416
7:00:00 AM	9.162	0	13.089	7:00:00 PM	10.88	0	16.44
7:15:00 AM	9.132	0	13.032	7:15:00 PM	10.921	0	16.521
7:30:00 AM	9.2	0	13.163	7:30:00 PM	11.096	0	16.866
7:45:00 AM	9.345	0	13.443	7:45:00 PM	11.121	0	16.917
8:00:00 AM	9.443	0	13.631	8:00:00 PM	10.951	0	16.581
8:15:00 AM	9.485	0	13.712	8:15:00 PM	10.757	0	16.199
8:30:00 AM	9.488	0	13.719	8:30:00 PM	10.805	0	16.292
8:45:00 AM	9.529	0	13.797	8:45:00 PM	10.971	0	16.621
9:00:00 AM	12.56	0	19.762	9:00:00 PM	10.962	0	16.603
9:15:00 AM	13.089	0	20.806	9:15:00 PM	11.053	0	16.782
9:30:00 AM	13.133	0	20.894	9:30:00 PM	11.118	0	16.911
9:45:00 AM	13.092	0	20.812	9:45:00 PM	11.401	0	17.469
10:00:00 AM	12.944	0	20.52	10:00:00 PM	11.419	0	17.506
10:15:00 AM	12.913	0	20.46	10:15:00 PM	11.5	0	17.666
10:30:00 AM	12.844	0	20.324	10:30:00 PM	11.515	0	17.695
10:45:00 AM	12.741	0	20.121	10:45:00 PM	11.487	0	17.64
11:00:00 AM	12.66	0	19.959	11:00:00 PM	11.459	0	17.584
11:15:00 AM	12.587	0	19.815	11:15:00 PM	11.384	0	17.435
11:30:00 AM	12.434	0	19.512	11:30:00 PM	11.14	0	16.954
11:45:00 AM	12.361	0	19.368	11:45:00 PM	10.854	0	16.389

	Inches	Feet/Sec	GPM
Daily Avg:	10.441	0.000	15.595
Daily Min:	8.354	0	11.55
Daily Max:	13.133	0	20.894
Peak to Avg:			1.34

MAXIMUM DAILY FLOW DATA



Maximum Level —

Maximum Velocity —

Maximum Flow Rate —

Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/3/2023, 12:00 a.m. - 12:00 p.m.**

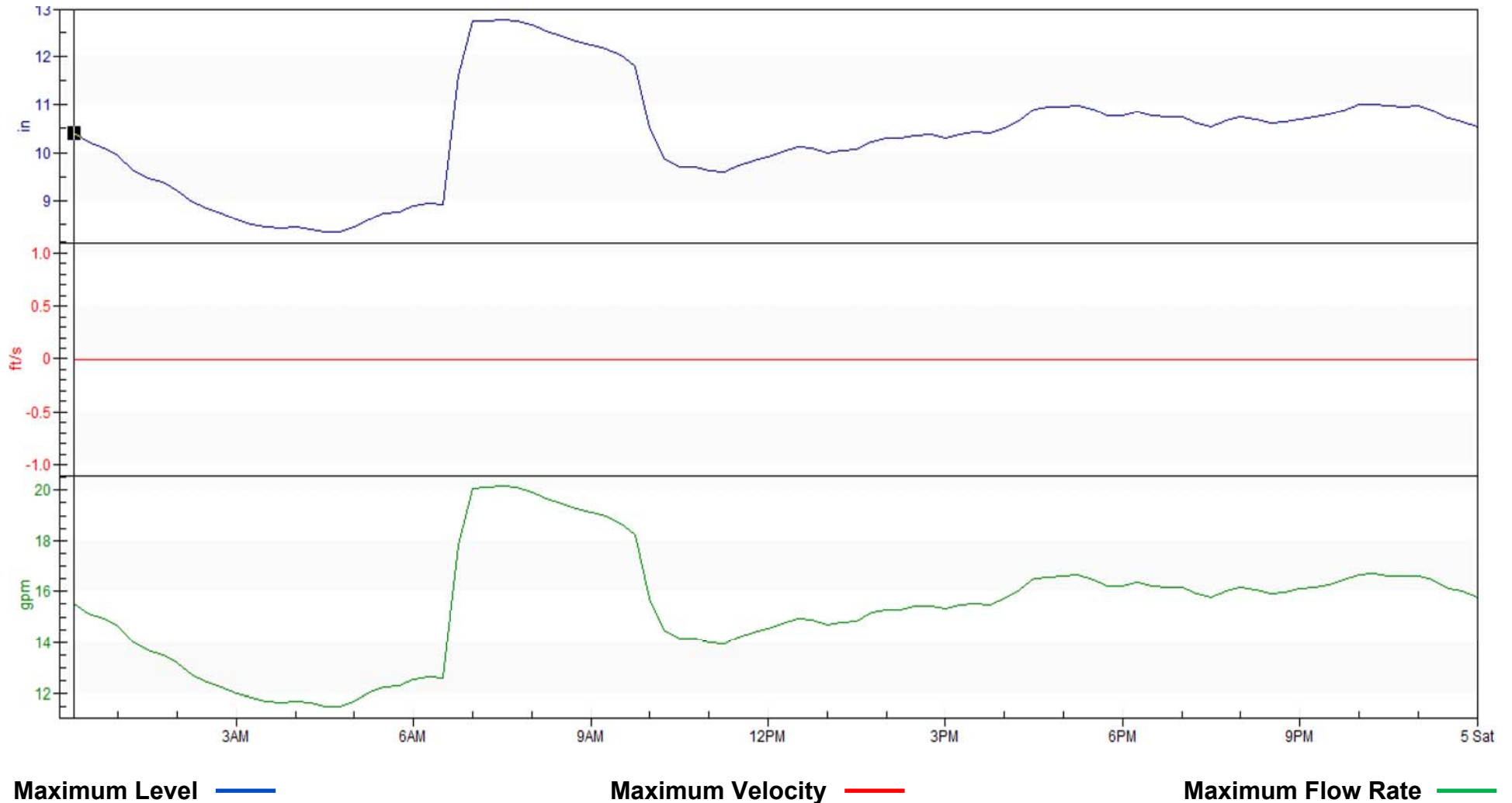
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Thursday - A.M. 8/3/2023

Thursday - P.M. 8/3/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	10.623	0	15.935	12:00:00 PM	9.876	0	14.472
12:15:00 AM	10.366	0	15.43	12:15:00 PM	9.867	0	14.454
12:30:00 AM	10.103	0	14.915	12:30:00 PM	9.937	0	14.592
12:45:00 AM	9.94	0	14.598	12:45:00 PM	10.039	0	14.79
1:00:00 AM	9.941	0	14.599	1:00:00 PM	10.022	0	14.757
1:15:00 AM	9.738	0	14.204	1:15:00 PM	10.193	0	15.091
1:30:00 AM	9.521	0	13.782	1:30:00 PM	10.255	0	15.212
1:45:00 AM	9.406	0	13.56	1:45:00 PM	10.208	0	15.121
2:00:00 AM	9.187	0	13.137	2:00:00 PM	10.221	0	15.145
2:15:00 AM	8.959	0	12.7	2:15:00 PM	10.313	0	15.326
2:30:00 AM	8.844	0	12.48	2:30:00 PM	10.334	0	15.368
2:45:00 AM	8.677	0	12.163	2:45:00 PM	10.364	0	15.427
3:00:00 AM	8.553	0	11.927	3:00:00 PM	10.376	0	15.449
3:15:00 AM	8.496	0	11.819	3:15:00 PM	10.271	0	15.244
3:30:00 AM	8.369	0	11.579	3:30:00 PM	10.215	0	15.134
3:45:00 AM	8.275	0	11.401	3:45:00 PM	10.255	0	15.213
4:00:00 AM	8.254	0	11.362	4:00:00 PM	10.351	0	15.401
4:15:00 AM	8.26	0	11.374	4:15:00 PM	10.412	0	15.52
4:30:00 AM	8.245	0	11.346	4:30:00 PM	10.458	0	15.61
4:45:00 AM	8.188	0	11.239	4:45:00 PM	10.62	0	15.93
5:00:00 AM	8.371	0	11.582	5:00:00 PM	10.834	0	16.35
5:15:00 AM	8.564	0	11.947	5:15:00 PM	10.94	0	16.56
5:30:00 AM	8.764	0	12.328	5:30:00 PM	10.942	0	16.563
5:45:00 AM	8.929	0	12.642	5:45:00 PM	10.987	0	16.651
6:00:00 AM	8.989	0	12.758	6:00:00 PM	10.959	0	16.596
6:15:00 AM	9.057	0	12.888	6:15:00 PM	10.877	0	16.435
6:30:00 AM	9.032	0	12.839	6:30:00 PM	10.882	0	16.444
6:45:00 AM	12.272	0	19.193	6:45:00 PM	10.826	0	16.333
7:00:00 AM	12.691	0	20.02	7:00:00 PM	10.777	0	16.238
7:15:00 AM	12.764	0	20.166	7:15:00 PM	10.747	0	16.178
7:30:00 AM	12.734	0	20.107	7:30:00 PM	10.676	0	16.038
7:45:00 AM	12.659	0	19.957	7:45:00 PM	10.705	0	16.096
8:00:00 AM	12.559	0	19.76	8:00:00 PM	10.78	0	16.244
8:15:00 AM	12.483	0	19.61	8:15:00 PM	10.765	0	16.215
8:30:00 AM	12.348	0	19.343	8:30:00 PM	10.585	0	15.86
8:45:00 AM	12.242	0	19.134	8:45:00 PM	10.687	0	16.06
9:00:00 AM	12.078	0	18.809	9:00:00 PM	10.706	0	16.098
9:15:00 AM	11.99	0	18.634	9:15:00 PM	10.793	0	16.27
9:30:00 AM	11.846	0	18.35	9:30:00 PM	10.958	0	16.595
9:45:00 AM	11.394	0	17.456	9:45:00 PM	11.236	0	17.142
10:00:00 AM	9.969	0	14.653	10:00:00 PM	11.301	0	17.272
10:15:00 AM	9.526	0	13.793	10:15:00 PM	11.355	0	17.378
10:30:00 AM	9.485	0	13.712	10:30:00 PM	11.41	0	17.487
10:45:00 AM	9.608	0	13.952	10:45:00 PM	11.384	0	17.435
11:00:00 AM	9.622	0	13.979	11:00:00 PM	11.422	0	17.511
11:15:00 AM	9.647	0	14.027	11:15:00 PM	11.361	0	17.39
11:30:00 AM	9.683	0	14.097	11:30:00 PM	11.161	0	16.994
11:45:00 AM	9.759	0	14.245	11:45:00 PM	10.893	0	16.467
				Inches	Feet/Sec	GPM	
				Daily Avg:	10.336	0.000	15.386
				Daily Min:	8.188	0	11.239
				Daily Max:	12.764	0	20.166
				Peak to Avg:	1.31		

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/4/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

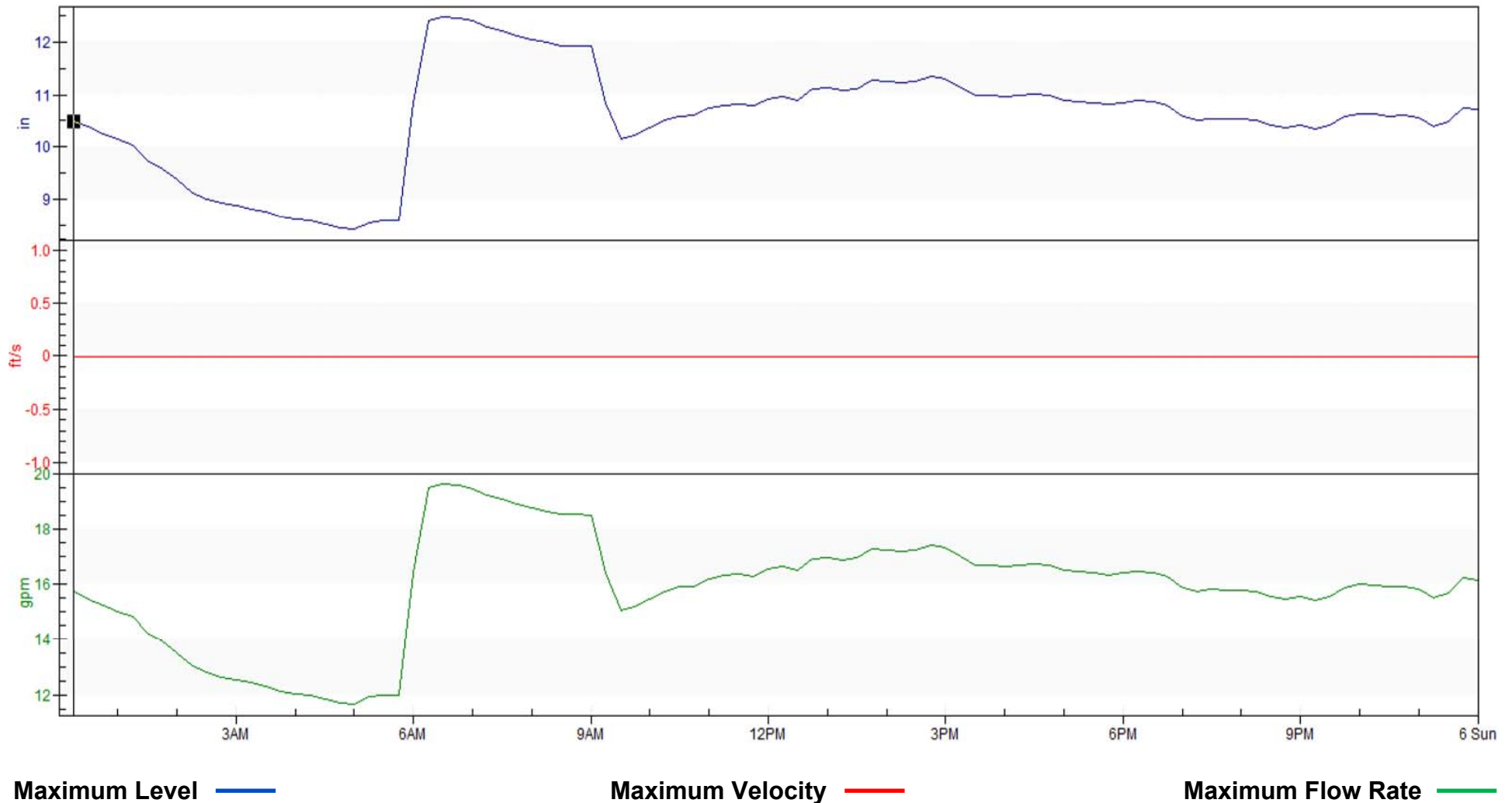
Friday - A.M. 8/4/2023

Friday - P.M. 8/4/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	10.665	0	16.018	12:00:00 PM	9.914	0	14.545
12:15:00 AM	10.417	0	15.531	12:15:00 PM	10.004	0	14.722
12:30:00 AM	10.215	0	15.134	12:30:00 PM	10.12	0	14.949
12:45:00 AM	10.102	0	14.913	12:45:00 PM	10.091	0	14.891
1:00:00 AM	9.946	0	14.609	1:00:00 PM	9.978	0	14.671
1:15:00 AM	9.617	0	13.969	1:15:00 PM	10.031	0	14.774
1:30:00 AM	9.474	0	13.692	1:30:00 PM	10.06	0	14.832
1:45:00 AM	9.385	0	13.52	1:45:00 PM	10.231	0	15.166
2:00:00 AM	9.207	0	13.176	2:00:00 PM	10.292	0	15.285
2:15:00 AM	8.96	0	12.703	2:15:00 PM	10.292	0	15.286
2:30:00 AM	8.838	0	12.47	2:30:00 PM	10.356	0	15.41
2:45:00 AM	8.733	0	12.269	2:45:00 PM	10.369	0	15.437
3:00:00 AM	8.606	0	12.027	3:00:00 PM	10.303	0	15.307
3:15:00 AM	8.514	0	11.852	3:15:00 PM	10.386	0	15.47
3:30:00 AM	8.44	0	11.713	3:30:00 PM	10.422	0	15.54
3:45:00 AM	8.425	0	11.685	3:45:00 PM	10.397	0	15.492
4:00:00 AM	8.437	0	11.707	4:00:00 PM	10.502	0	15.698
4:15:00 AM	8.407	0	11.65	4:15:00 PM	10.678	0	16.042
4:30:00 AM	8.343	0	11.529	4:30:00 PM	10.905	0	16.49
4:45:00 AM	8.344	0	11.531	4:45:00 PM	10.943	0	16.564
5:00:00 AM	8.449	0	11.73	5:00:00 PM	10.969	0	16.615
5:15:00 AM	8.617	0	12.047	5:15:00 PM	10.981	0	16.64
5:30:00 AM	8.724	0	12.251	5:30:00 PM	10.895	0	16.469
5:45:00 AM	8.764	0	12.327	5:45:00 PM	10.769	0	16.221
6:00:00 AM	8.887	0	12.563	6:00:00 PM	10.775	0	16.233
6:15:00 AM	8.941	0	12.665	6:15:00 PM	10.844	0	16.37
6:30:00 AM	8.916	0	12.619	6:30:00 PM	10.769	0	16.222
6:45:00 AM	11.6	0	17.864	6:45:00 PM	10.739	0	16.162
7:00:00 AM	12.723	0	20.085	7:00:00 PM	10.743	0	16.171
7:15:00 AM	12.742	0	20.123	7:15:00 PM	10.621	0	15.93
7:30:00 AM	12.759	0	20.156	7:30:00 PM	10.549	0	15.79
7:45:00 AM	12.735	0	20.108	7:45:00 PM	10.674	0	16.035
8:00:00 AM	12.651	0	19.941	8:00:00 PM	10.749	0	16.183
8:15:00 AM	12.526	0	19.695	8:15:00 PM	10.696	0	16.078
8:30:00 AM	12.413	0	19.471	8:30:00 PM	10.604	0	15.898
8:45:00 AM	12.304	0	19.256	8:45:00 PM	10.646	0	15.979
9:00:00 AM	12.238	0	19.125	9:00:00 PM	10.706	0	16.098
9:15:00 AM	12.158	0	18.967	9:15:00 PM	10.735	0	16.156
9:30:00 AM	12.014	0	18.681	9:30:00 PM	10.787	0	16.258
9:45:00 AM	11.798	0	18.254	9:45:00 PM	10.884	0	16.449
10:00:00 AM	10.502	0	15.698	10:00:00 PM	10.995	0	16.668
10:15:00 AM	9.86	0	14.442	10:15:00 PM	11.012	0	16.702
10:30:00 AM	9.708	0	14.146	10:30:00 PM	10.971	0	16.62
10:45:00 AM	9.714	0	14.157	10:45:00 PM	10.96	0	16.598
11:00:00 AM	9.617	0	13.968	11:00:00 PM	10.972	0	16.622
11:15:00 AM	9.609	0	13.954	11:15:00 PM	10.889	0	16.457
11:30:00 AM	9.718	0	14.165	11:30:00 PM	10.726	0	16.137
11:45:00 AM	9.821	0	14.365	11:45:00 PM	10.655	0	15.998

	Inches	Feet/Sec	GPM
Daily Avg:	10.332	0.000	15.377
Daily Min:	8.343	0	11.529
Daily Max:	12.759	0	20.156
Peak to Avg:			1.31

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/5/2023, 12:00 a.m. - 12:00 p.m.**

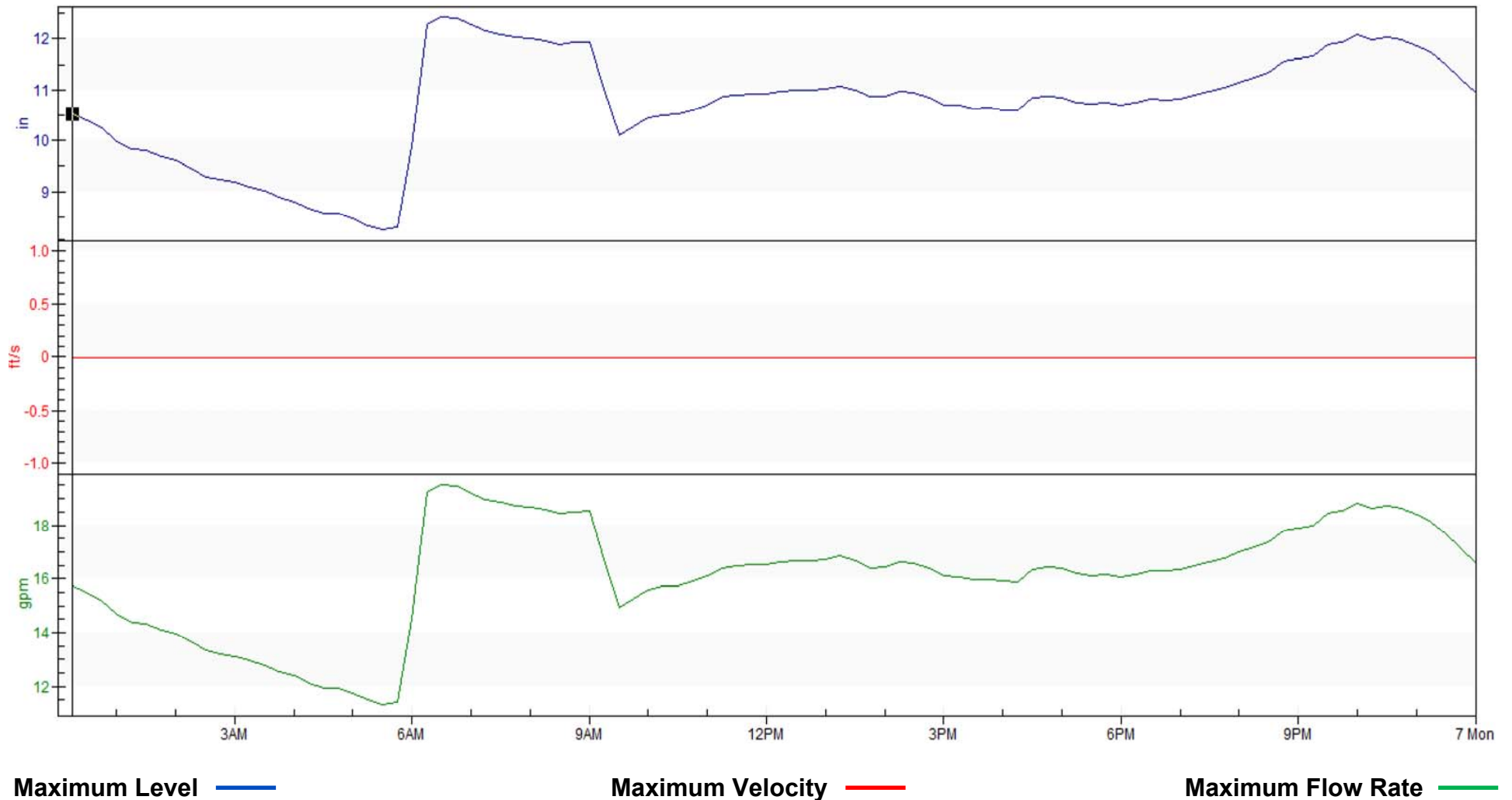
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Saturday - A.M. 8/5/2023

Saturday - P.M. 8/5/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow																				
12:00:00 AM	10.533	0	15.757	12:00:00 PM	10.93	0	16.54																				
12:15:00 AM	10.498	0	15.688	12:15:00 PM	10.963	0	16.604																				
12:30:00 AM	10.38	0	15.458	12:30:00 PM	10.901	0	16.481																				
12:45:00 AM	10.255	0	15.213	12:45:00 PM	11.102	0	16.879																				
1:00:00 AM	10.14	0	14.988	1:00:00 PM	11.136	0	16.946																				
1:15:00 AM	10.041	0	14.794	1:15:00 PM	11.096	0	16.866																				
1:30:00 AM	9.734	0	14.195	1:30:00 PM	11.122	0	16.918																				
1:45:00 AM	9.571	0	13.88	1:45:00 PM	11.288	0	17.246																				
2:00:00 AM	9.372	0	13.494	2:00:00 PM	11.26	0	17.191																				
2:15:00 AM	9.127	0	13.023	2:15:00 PM	11.241	0	17.152																				
2:30:00 AM	9.004	0	12.787	2:30:00 PM	11.261	0	17.192																				
2:45:00 AM	8.917	0	12.619	2:45:00 PM	11.358	0	17.383																				
3:00:00 AM	8.869	0	12.528	3:00:00 PM	11.313	0	17.295																				
3:15:00 AM	8.816	0	12.427	3:15:00 PM	11.147	0	16.967																				
3:30:00 AM	8.761	0	12.323	3:30:00 PM	10.994	0	16.665																				
3:45:00 AM	8.667	0	12.143	3:45:00 PM	10.993	0	16.664																				
4:00:00 AM	8.618	0	12.049	4:00:00 PM	10.963	0	16.604																				
4:15:00 AM	8.591	0	11.998	4:15:00 PM	10.985	0	16.647																				
4:30:00 AM	8.517	0	11.858	4:30:00 PM	11.02	0	16.717																				
4:45:00 AM	8.448	0	11.728	4:45:00 PM	10.995	0	16.667																				
5:00:00 AM	8.421	0	11.677	5:00:00 PM	10.892	0	16.464																				
5:15:00 AM	8.55	0	11.922	5:15:00 PM	10.877	0	16.435																				
5:30:00 AM	8.585	0	11.988	5:30:00 PM	10.847	0	16.375																				
5:45:00 AM	8.587	0	11.991	5:45:00 PM	10.817	0	16.317																				
6:00:00 AM	10.845	0	16.372	6:00:00 PM	10.851	0	16.383																				
6:15:00 AM	12.419	0	19.483	6:15:00 PM	10.884	0	16.448																				
6:30:00 AM	12.481	0	19.605	6:30:00 PM	10.861	0	16.404																				
6:45:00 AM	12.46	0	19.564	6:45:00 PM	10.796	0	16.275																				
7:00:00 AM	12.402	0	19.45	7:00:00 PM	10.58	0	15.85																				
7:15:00 AM	12.289	0	19.227	7:15:00 PM	10.507	0	15.707																				
7:30:00 AM	12.221	0	19.092	7:30:00 PM	10.545	0	15.782																				
7:45:00 AM	12.113	0	18.878	7:45:00 PM	10.532	0	15.755																				
8:00:00 AM	12.042	0	18.737	8:00:00 PM	10.532	0	15.756																				
8:15:00 AM	11.992	0	18.638	8:15:00 PM	10.509	0	15.71																				
8:30:00 AM	11.93	0	18.515	8:30:00 PM	10.405	0	15.507																				
8:45:00 AM	11.939	0	18.533	8:45:00 PM	10.377	0	15.452																				
9:00:00 AM	11.917	0	18.489	9:00:00 PM	10.42	0	15.537																				
9:15:00 AM	10.843	0	16.368	9:15:00 PM	10.344	0	15.387																				
9:30:00 AM	10.161	0	15.028	9:30:00 PM	10.423	0	15.541																				
9:45:00 AM	10.231	0	15.165	9:45:00 PM	10.579	0	15.848																				
10:00:00 AM	10.375	0	15.448	10:00:00 PM	10.639	0	15.965																				
10:15:00 AM	10.499	0	15.691	10:15:00 PM	10.624	0	15.936																				
10:30:00 AM	10.59	0	15.871	10:30:00 PM	10.594	0	15.877																				
10:45:00 AM	10.612	0	15.913	10:45:00 PM	10.603	0	15.895																				
11:00:00 AM	10.747	0	16.179	11:00:00 PM	10.563	0	15.816																				
11:15:00 AM	10.801	0	16.284	11:15:00 PM	10.397	0	15.491																				
11:30:00 AM	10.82	0	16.322	11:30:00 PM	10.488	0	15.669																				
11:45:00 AM	10.794	0	16.27	11:45:00 PM	10.756	0	16.196																				
				<table><tr><th></th><th>Inches</th><th>Feet/Sec</th><th>GPM</th></tr><tr><td>Daily Avg:</td><td>10.561</td><td>0.000</td><td>15.824</td></tr><tr><td>Daily Min:</td><td>8.421</td><td>0</td><td>11.677</td></tr><tr><td>Daily Max:</td><td>12.481</td><td>0</td><td>19.605</td></tr><tr><td>Peak to Avg:</td><td></td><td></td><td>1.24</td></tr></table>					Inches	Feet/Sec	GPM	Daily Avg:	10.561	0.000	15.824	Daily Min:	8.421	0	11.677	Daily Max:	12.481	0	19.605	Peak to Avg:			1.24
	Inches	Feet/Sec	GPM																								
Daily Avg:	10.561	0.000	15.824																								
Daily Min:	8.421	0	11.677																								
Daily Max:	12.481	0	19.605																								
Peak to Avg:			1.24																								

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/6/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

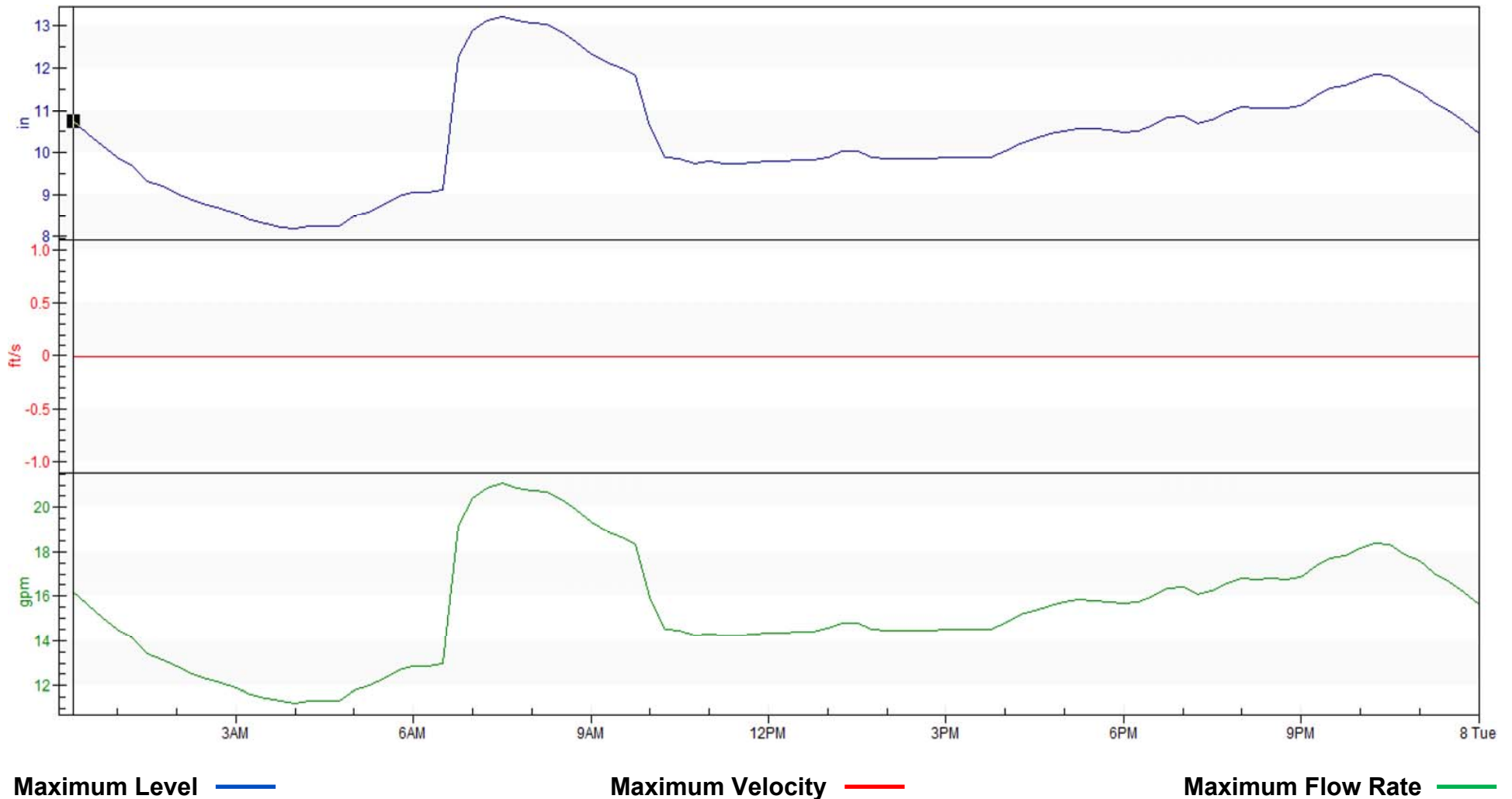
Sunday - A.M. 8/6/2023

Sunday - P.M. 8/6/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	10.719	0	16.124	12:00:00 PM	10.92	0	16.519
12:15:00 AM	10.528	0	15.747	12:15:00 PM	10.97	0	16.617
12:30:00 AM	10.404	0	15.504	12:30:00 PM	11.004	0	16.684
12:45:00 AM	10.243	0	15.188	12:45:00 PM	10.99	0	16.658
1:00:00 AM	9.993	0	14.699	1:00:00 PM	11.021	0	16.719
1:15:00 AM	9.83	0	14.383	1:15:00 PM	11.081	0	16.837
1:30:00 AM	9.796	0	14.316	1:30:00 PM	10.985	0	16.648
1:45:00 AM	9.691	0	14.113	1:45:00 PM	10.861	0	16.403
2:00:00 AM	9.614	0	13.962	2:00:00 PM	10.868	0	16.417
2:15:00 AM	9.47	0	13.684	2:15:00 PM	10.971	0	16.619
2:30:00 AM	9.289	0	13.335	2:30:00 PM	10.949	0	16.577
2:45:00 AM	9.225	0	13.212	2:45:00 PM	10.842	0	16.365
3:00:00 AM	9.179	0	13.123	3:00:00 PM	10.701	0	16.088
3:15:00 AM	9.1	0	12.97	3:15:00 PM	10.696	0	16.078
3:30:00 AM	9.015	0	12.807	3:30:00 PM	10.629	0	15.946
3:45:00 AM	8.89	0	12.569	3:45:00 PM	10.638	0	15.963
4:00:00 AM	8.799	0	12.395	4:00:00 PM	10.611	0	15.912
4:15:00 AM	8.658	0	12.126	4:15:00 PM	10.592	0	15.873
4:30:00 AM	8.56	0	11.94	4:30:00 PM	10.841	0	16.363
4:45:00 AM	8.557	0	11.934	4:45:00 PM	10.883	0	16.447
5:00:00 AM	8.47	0	11.77	5:00:00 PM	10.853	0	16.387
5:15:00 AM	8.328	0	11.501	5:15:00 PM	10.75	0	16.184
5:30:00 AM	8.245	0	11.346	5:30:00 PM	10.712	0	16.109
5:45:00 AM	8.292	0	11.434	5:45:00 PM	10.739	0	16.163
6:00:00 AM	9.889	0	14.498	6:00:00 PM	10.694	0	16.075
6:15:00 AM	12.29	0	19.228	6:15:00 PM	10.74	0	16.165
6:30:00 AM	12.433	0	19.512	6:30:00 PM	10.811	0	16.304
6:45:00 AM	12.41	0	19.465	6:45:00 PM	10.808	0	16.3
7:00:00 AM	12.28	0	19.208	7:00:00 PM	10.822	0	16.326
7:15:00 AM	12.165	0	18.981	7:15:00 PM	10.896	0	16.473
7:30:00 AM	12.097	0	18.846	7:30:00 PM	10.977	0	16.632
7:45:00 AM	12.048	0	18.75	7:45:00 PM	11.045	0	16.767
8:00:00 AM	12.021	0	18.696	8:00:00 PM	11.153	0	16.98
8:15:00 AM	11.969	0	18.594	8:15:00 PM	11.256	0	17.182
8:30:00 AM	11.887	0	18.431	8:30:00 PM	11.352	0	17.372
8:45:00 AM	11.927	0	18.51	8:45:00 PM	11.554	0	17.771
9:00:00 AM	11.941	0	18.537	9:00:00 PM	11.607	0	17.877
9:15:00 AM	11.027	0	16.731	9:15:00 PM	11.669	0	17.999
9:30:00 AM	10.116	0	14.94	9:30:00 PM	11.893	0	18.442
9:45:00 AM	10.276	0	15.253	9:45:00 PM	11.945	0	18.544
10:00:00 AM	10.439	0	15.573	10:00:00 PM	12.09	0	18.833
10:15:00 AM	10.509	0	15.711	10:15:00 PM	11.997	0	18.648
10:30:00 AM	10.514	0	15.721	10:30:00 PM	12.034	0	18.722
10:45:00 AM	10.608	0	15.906	10:45:00 PM	11.988	0	18.631
11:00:00 AM	10.707	0	16.1	11:00:00 PM	11.871	0	18.399
11:15:00 AM	10.862	0	16.406	11:15:00 PM	11.738	0	18.135
11:30:00 AM	10.895	0	16.47	11:30:00 PM	11.488	0	17.64
11:45:00 AM	10.915	0	16.51	11:45:00 PM	11.226	0	17.124

	Inches	Feet/Sec	GPM
Daily Avg:	10.717	0.000	16.132
Daily Min:	8.245	0	11.346
Daily Max:	12.433	0	19.512
Peak to Avg:			1.21

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/7/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Monday - A.M. 8/7/2023

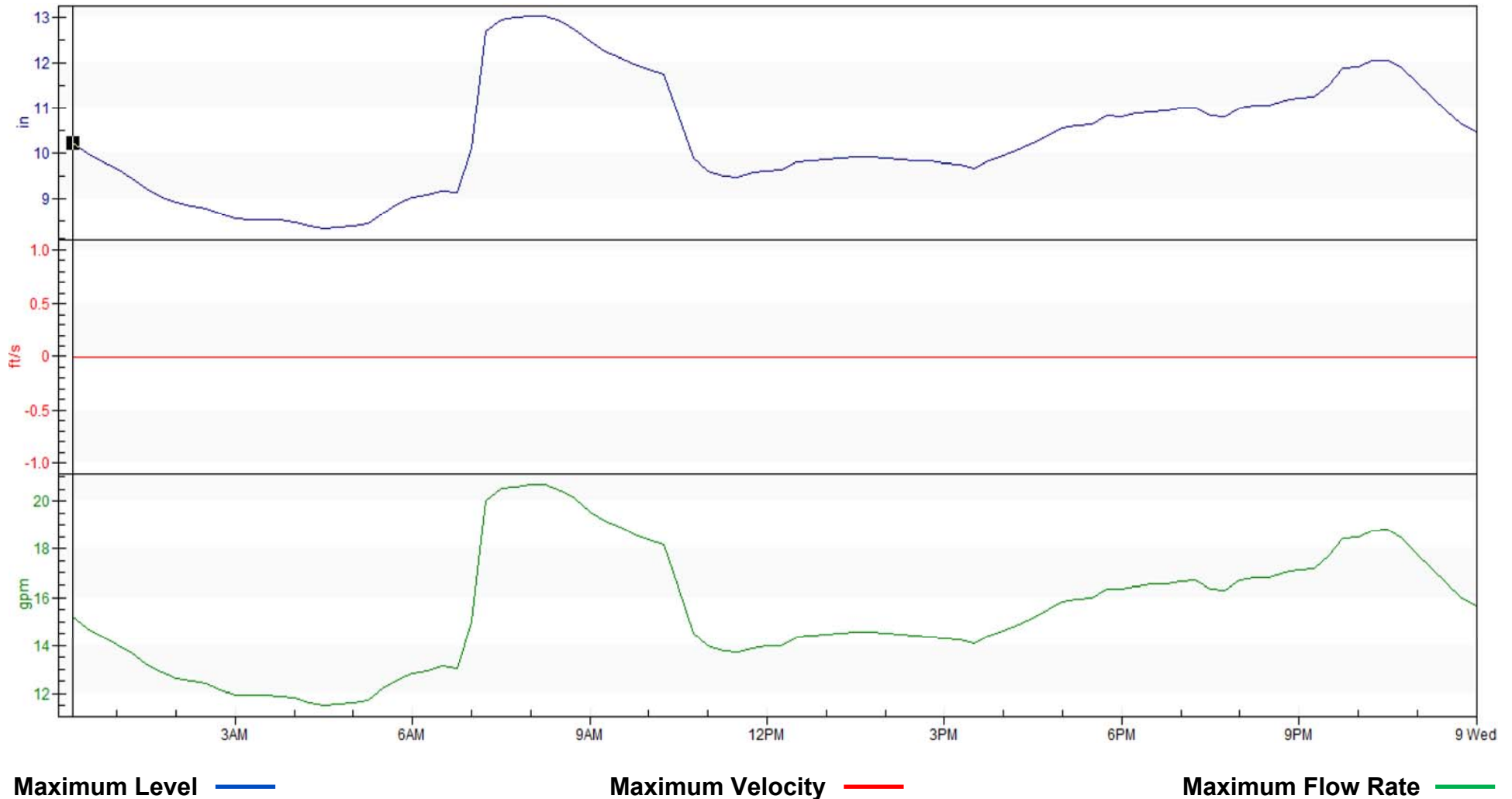
Time	Level	Velocity	Velocity
12:10:00 AM	10.943	0	16.565
12:15:00 AM	10.743	0	16.171
12:30:00 AM	10.458	0	15.61
12:45:00 AM	10.157	0	15.02
1:00:00 AM	9.895	0	14.509
1:15:00 AM	9.685	0	14.101
1:30:00 AM	9.326	0	13.406
1:45:00 AM	9.201	0	13.164
2:00:00 AM	9.035	0	12.845
2:15:00 AM	8.875	0	12.539
2:30:00 AM	8.749	0	12.3
2:45:00 AM	8.668	0	12.145
3:00:00 AM	8.556	0	11.933
3:15:00 AM	8.399	0	11.635
3:30:00 AM	8.303	0	11.453
3:45:00 AM	8.233	0	11.322
4:00:00 AM	8.192	0	11.245
4:15:00 AM	8.239	0	11.334
4:30:00 AM	8.249	0	11.353
4:45:00 AM	8.257	0	11.368
5:00:00 AM	8.479	0	11.786
5:15:00 AM	8.591	0	11.999
5:30:00 AM	8.744	0	12.289
5:45:00 AM	8.967	0	12.715
6:00:00 AM	9.053	0	12.881
6:15:00 AM	9.044	0	12.863
6:30:00 AM	9.116	0	13.001
6:45:00 AM	12.256	0	19.161
7:00:00 AM	12.89	0	20.414
7:15:00 AM	13.12	0	20.868
7:30:00 AM	13.224	0	21.072
7:45:00 AM	13.127	0	20.882
8:00:00 AM	13.071	0	20.771
8:15:00 AM	13.044	0	20.717
8:30:00 AM	12.87	0	20.375
8:45:00 AM	12.623	0	19.887
9:00:00 AM	12.336	0	19.319
9:15:00 AM	12.154	0	18.959
9:30:00 AM	11.994	0	18.643
9:45:00 AM	11.831	0	18.32
10:00:00 AM	10.633	0	15.954
10:15:00 AM	9.891	0	14.501
10:30:00 AM	9.856	0	14.434
10:45:00 AM	9.742	0	14.212
11:00:00 AM	9.788	0	14.3
11:15:00 AM	9.734	0	14.197
11:30:00 AM	9.754	0	14.235
11:45:00 AM	9.776	0	14.278

Monday - P.M. 8/7/2023

Time	Level	Velocity	Flow
12:00:00 PM	9.794	0	14.313
12:15:00 PM	9.807	0	14.338
12:30:00 PM	9.84	0	14.401
12:45:00 PM	9.821	0	14.365
1:00:00 PM	9.904	0	14.527
1:15:00 PM	10.031	0	14.775
1:30:00 PM	10.027	0	14.766
1:45:00 PM	9.877	0	14.474
2:00:00 PM	9.856	0	14.433
2:15:00 PM	9.847	0	14.417
2:30:00 PM	9.871	0	14.462
2:45:00 PM	9.853	0	14.427
3:00:00 PM	9.878	0	14.477
3:15:00 PM	9.902	0	14.523
3:30:00 PM	9.877	0	14.474
3:45:00 PM	9.882	0	14.484
4:00:00 PM	10.047	0	14.806
4:15:00 PM	10.221	0	15.147
4:30:00 PM	10.329	0	15.357
4:45:00 PM	10.448	0	15.591
5:00:00 PM	10.514	0	15.72
5:15:00 PM	10.578	0	15.847
5:30:00 PM	10.563	0	15.817
5:45:00 PM	10.532	0	15.757
6:00:00 PM	10.481	0	15.655
6:15:00 PM	10.524	0	15.74
6:30:00 PM	10.659	0	16.005
6:45:00 PM	10.836	0	16.355
7:00:00 PM	10.859	0	16.399
7:15:00 PM	10.703	0	16.093
7:30:00 PM	10.794	0	16.271
7:45:00 PM	10.965	0	16.608
8:00:00 PM	11.074	0	16.823
8:15:00 PM	11.045	0	16.765
8:30:00 PM	11.055	0	16.787
8:45:00 PM	11.048	0	16.772
9:00:00 PM	11.099	0	16.873
9:15:00 PM	11.358	0	17.383
9:30:00 PM	11.53	0	17.724
9:45:00 PM	11.578	0	17.818
10:00:00 PM	11.742	0	18.144
10:15:00 PM	11.862	0	18.381
10:30:00 PM	11.822	0	18.302
10:45:00 PM	11.62	0	17.902
11:00:00 PM	11.452	0	17.569
11:15:00 PM	11.181	0	17.034
11:30:00 PM	10.984	0	16.646
11:45:00 PM	10.758	0	16.201

	Inches	Feet/Sec	GPM
Daily Avg:	10.371	0.000	15.457
Daily Min:	8.192	0	11.245
Daily Max:	13.224	0	21.072
Peak to Avg:			1.36

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/8/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

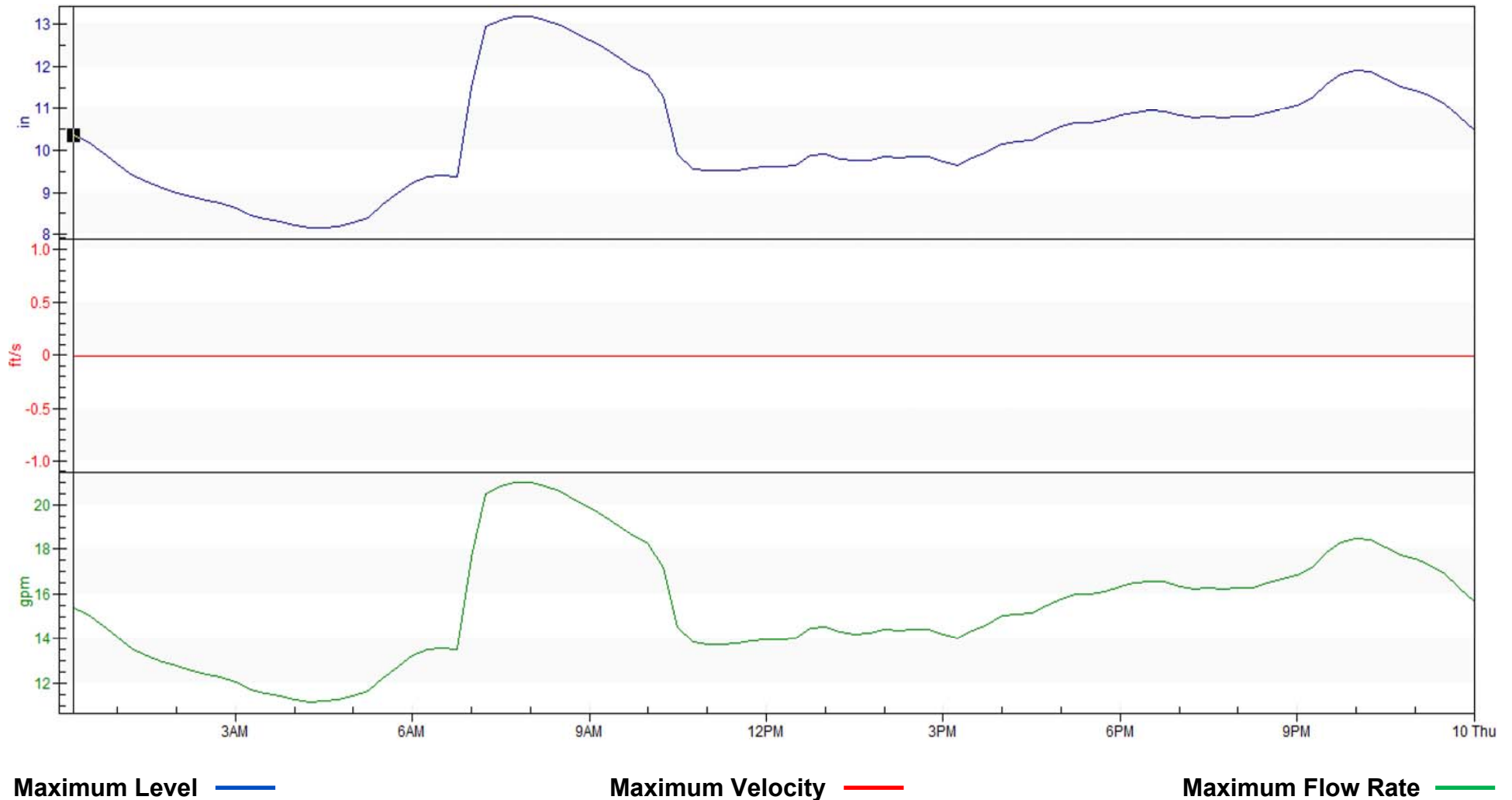
Tuesday - A.M. 8/8/2023

Tuesday - P.M. 8/8/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	10.454	0	15.603	12:00:00 PM	9.609	0	13.952
12:15:00 AM	10.233	0	15.17	12:15:00 PM	9.632	0	13.998
12:30:00 AM	9.994	0	14.702	12:30:00 PM	9.818	0	14.36
12:45:00 AM	9.821	0	14.366	12:45:00 PM	9.839	0	14.401
1:00:00 AM	9.658	0	14.049	1:00:00 PM	9.858	0	14.437
1:15:00 AM	9.452	0	13.65	1:15:00 PM	9.886	0	14.492
1:30:00 AM	9.219	0	13.199	1:30:00 PM	9.911	0	14.541
1:45:00 AM	9.039	0	12.853	1:45:00 PM	9.909	0	14.536
2:00:00 AM	8.913	0	12.611	2:00:00 PM	9.888	0	14.495
2:15:00 AM	8.847	0	12.485	2:15:00 PM	9.854	0	14.429
2:30:00 AM	8.791	0	12.38	2:30:00 PM	9.838	0	14.399
2:45:00 AM	8.672	0	12.153	2:45:00 PM	9.824	0	14.37
3:00:00 AM	8.565	0	11.95	3:00:00 PM	9.772	0	14.27
3:15:00 AM	8.544	0	11.909	3:15:00 PM	9.747	0	14.221
3:30:00 AM	8.54	0	11.902	3:30:00 PM	9.678	0	14.087
3:45:00 AM	8.521	0	11.866	3:45:00 PM	9.829	0	14.381
4:00:00 AM	8.487	0	11.802	4:00:00 PM	9.935	0	14.587
4:15:00 AM	8.39	0	11.618	4:15:00 PM	10.083	0	14.877
4:30:00 AM	8.337	0	11.518	4:30:00 PM	10.219	0	15.143
4:45:00 AM	8.358	0	11.557	4:45:00 PM	10.392	0	15.481
5:00:00 AM	8.39	0	11.618	5:00:00 PM	10.555	0	15.801
5:15:00 AM	8.437	0	11.706	5:15:00 PM	10.621	0	15.93
5:30:00 AM	8.683	0	12.173	5:30:00 PM	10.65	0	15.988
5:45:00 AM	8.897	0	12.582	5:45:00 PM	10.824	0	16.331
6:00:00 AM	9.033	0	12.842	6:00:00 PM	10.822	0	16.327
6:15:00 AM	9.081	0	12.934	6:15:00 PM	10.88	0	16.44
6:30:00 AM	9.175	0	13.114	6:30:00 PM	10.933	0	16.546
6:45:00 AM	9.134	0	13.036	6:45:00 PM	10.935	0	16.549
7:00:00 AM	10.128	0	14.963	7:00:00 PM	10.997	0	16.671
7:15:00 AM	12.688	0	20.015	7:15:00 PM	11.012	0	16.701
7:30:00 AM	12.957	0	20.546	7:30:00 PM	10.825	0	16.332
7:45:00 AM	12.996	0	20.624	7:45:00 PM	10.801	0	16.286
8:00:00 AM	13.031	0	20.692	8:00:00 PM	11.006	0	16.69
8:15:00 AM	13.025	0	20.681	8:15:00 PM	11.06	0	16.796
8:30:00 AM	12.912	0	20.459	8:30:00 PM	11.057	0	16.789
8:45:00 AM	12.733	0	20.103	8:45:00 PM	11.184	0	17.039
9:00:00 AM	12.464	0	19.572	9:00:00 PM	11.23	0	17.131
9:15:00 AM	12.256	0	19.162	9:15:00 PM	11.258	0	17.187
9:30:00 AM	12.12	0	18.892	9:30:00 PM	11.516	0	17.697
9:45:00 AM	11.964	0	18.582	9:45:00 PM	11.905	0	18.467
10:00:00 AM	11.871	0	18.399	10:00:00 PM	11.914	0	18.484
10:15:00 AM	11.763	0	18.185	10:15:00 PM	12.053	0	18.758
10:30:00 AM	10.876	0	16.433	10:30:00 PM	12.067	0	18.786
10:45:00 AM	9.891	0	14.502	10:45:00 PM	11.894	0	18.444
11:00:00 AM	9.611	0	13.958	11:00:00 PM	11.546	0	17.755
11:15:00 AM	9.508	0	13.758	11:15:00 PM	11.251	0	17.172
11:30:00 AM	9.488	0	13.719	11:30:00 PM	10.932	0	16.544
11:45:00 AM	9.574	0	13.885	11:45:00 PM	10.655	0	15.997

	Inches	Feet/Sec	GPM
Daily Avg:	10.347	0.000	15.410
Daily Min:	8.337	0	11.518
Daily Max:	13.031	0	20.692
Peak to Avg:			1.34

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7033**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/9/2023, 12:00 a.m. - 12:00 p.m.**

Sewer Line Flow Study Summary

Project: City of McFarland, Sewer Flow Study

Location: MH-7033

Pipe Size: 24" VCP

Time Period: 7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.

Level - Inches

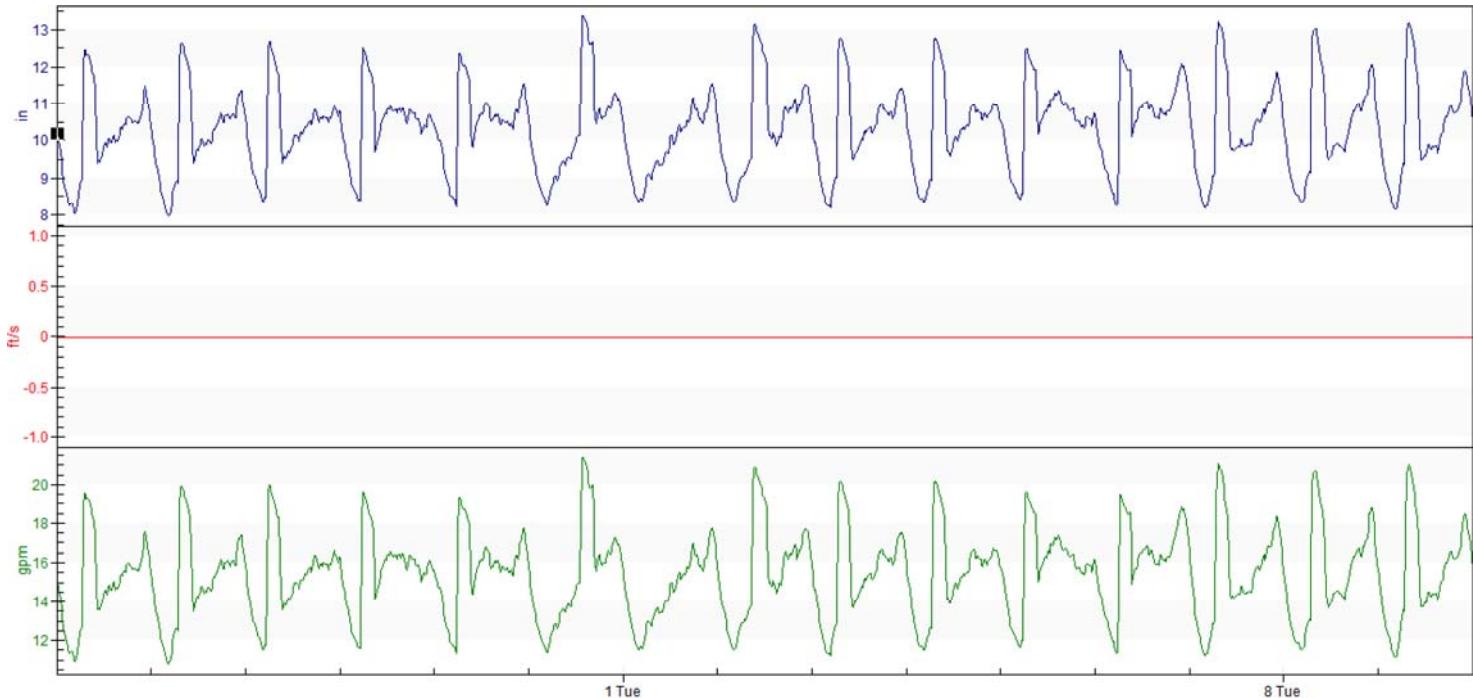
Average:	.....	10.295
Maximum:	.....	13.372
Minimum:	.....	7.946
Max d/D:	.....	55.7%

Velocity - Feet per Second

Average:	.....
Maximum:	.....
Minimum:	.....

Flow Rate - Gallons Per Minute

Average:	.....
Maximum:	.....
Minimum:	.....
Peak to Average	.....



— Maximum Level

— Maximum Velocity

— Maximum Flow Rate

Sewer Line Daily Totals

Project: **City of McFarland, Sewer Flow Study**

Location: **MH-7033**

Pipe Size: **24" VCP**

Time Period: **7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.**

Daily Totals - US Gallons

Date:

Gallons:

7/26/2023

7/27/2023

7/28/2023

7/29/2023

7/30/2023

7/31/2023

8/1/2023

8/2/2023

8/3/2023

8/4/2023

8/5/2023

8/6/2023

8/7/2023

8/8/2023

8/9/2023

Total Recorded Flow (15 Days)

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7033

Tuesday - A.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 AM	10.482	0	15.659
12:15:00 AM	10.349	0	15.398
12:30:00 AM	10.196	0	15.097
12:45:00 AM	9.935	0	14.587
1:00:00 AM	9.681	0	14.093
1:15:00 AM	9.39	0	13.53
1:30:00 AM	9.24	0	13.24
1:45:00 AM	9.104	0	12.978
2:00:00 AM	9	0	12.778
2:15:00 AM	8.896	0	12.58
2:30:00 AM	8.8	0	12.397
2:45:00 AM	8.738	0	12.278
3:00:00 AM	8.616	0	12.046
3:15:00 AM	8.441	0	11.715
3:30:00 AM	8.36	0	11.561
3:45:00 AM	8.302	0	11.452
4:00:00 AM	8.205	0	11.269
4:15:00 AM	8.15	0	11.167
4:30:00 AM	8.162	0	11.189
4:45:00 AM	8.19	0	11.241
5:00:00 AM	8.279	0	11.408
5:15:00 AM	8.405	0	11.646
5:30:00 AM	8.703	0	12.211
5:45:00 AM	8.982	0	12.745
6:00:00 AM	9.227	0	13.214
6:15:00 AM	9.384	0	13.518
6:30:00 AM	9.409	0	13.566
6:45:00 AM	9.376	0	13.503
7:00:00 AM	11.488	0	17.642
7:15:00 AM	12.949	0	20.53
7:30:00 AM	13.103	0	20.834
7:45:00 AM	13.186	0	20.997
8:00:00 AM	13.187	0	21
8:15:00 AM	13.103	0	20.833
8:30:00 AM	12.983	0	20.597
8:45:00 AM	12.792	0	20.221
9:00:00 AM	12.621	0	19.883
9:15:00 AM	12.434	0	19.513
9:30:00 AM	12.19	0	19.031
9:45:00 AM	11.966	0	18.586
10:00:00 AM	11.809	0	18.277
10:15:00 AM	11.269	0	17.208
10:30:00 AM	9.919	0	14.556
10:45:00 AM	9.559	0	13.856
11:00:00 AM	9.51	0	13.761
11:15:00 AM	9.509	0	13.759
11:30:00 AM	9.525	0	13.791
11:45:00 AM	9.596	0	13.928

Tuesday - P.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 PM	9.605	0	13.946
12:15:00 PM	9.621	0	13.976
12:30:00 PM	9.649	0	14.032
12:45:00 PM	9.893	0	14.505
1:00:00 PM	9.898	0	14.516
1:15:00 PM	9.781	0	14.288
1:30:00 PM	9.747	0	14.222
1:45:00 PM	9.759	0	14.244
2:00:00 PM	9.839	0	14.4
2:15:00 PM	9.832	0	14.386
2:30:00 PM	9.846	0	14.413
2:45:00 PM	9.862	0	14.446
3:00:00 PM	9.743	0	14.214
3:15:00 PM	9.653	0	14.039
3:30:00 PM	9.816	0	14.355
3:45:00 PM	9.972	0	14.659
4:00:00 PM	10.162	0	15.031
4:15:00 PM	10.204	0	15.113
4:30:00 PM	10.235	0	15.174
4:45:00 PM	10.41	0	15.516
5:00:00 PM	10.551	0	15.793
5:15:00 PM	10.646	0	15.98
5:30:00 PM	10.663	0	16.014
5:45:00 PM	10.724	0	16.134
6:00:00 PM	10.828	0	16.337
6:15:00 PM	10.902	0	16.485
6:30:00 PM	10.946	0	16.571
6:45:00 PM	10.934	0	16.547
7:00:00 PM	10.824	0	16.329
7:15:00 PM	10.763	0	16.209
7:30:00 PM	10.79	0	16.263
7:45:00 PM	10.777	0	16.238
8:00:00 PM	10.789	0	16.26
8:15:00 PM	10.812	0	16.307
8:30:00 PM	10.905	0	16.49
8:45:00 PM	10.987	0	16.652
9:00:00 PM	11.081	0	16.838
9:15:00 PM	11.258	0	17.187
9:30:00 PM	11.588	0	17.838
9:45:00 PM	11.821	0	18.3
10:00:00 PM	11.899	0	18.454
10:15:00 PM	11.872	0	18.4
10:30:00 PM	11.706	0	18.073
10:45:00 PM	11.531	0	17.727
11:00:00 PM	11.443	0	17.552
11:15:00 PM	11.319	0	17.308
11:30:00 PM	11.115	0	16.905
11:45:00 PM	10.798	0	16.279

	Inches	Feet/Sec	GPM
Daily Avg:	10.337	0.000	15.391
Daily Min:	8.15	0	11.167
Daily Max:	13.187	0	21
Peak to Avg:			1.36

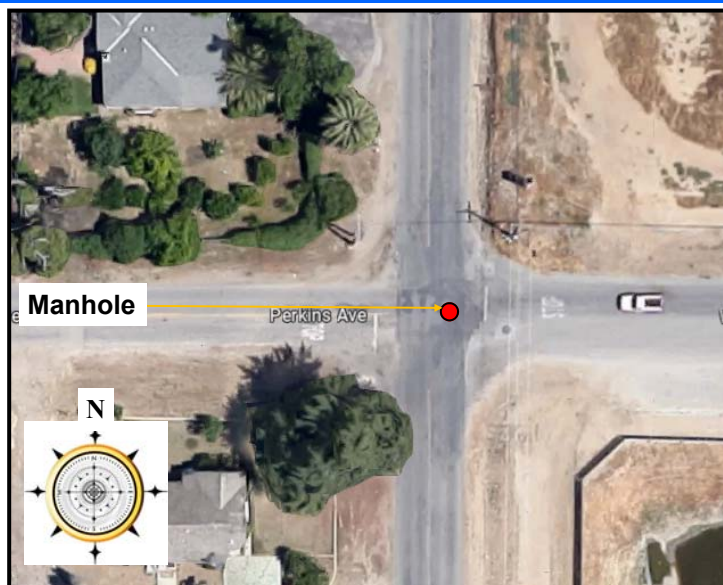
CITY OF MCFARLAND - SEWER FLOW STUDY

MH Location: **MH-7037, Intersection of
Garzoli Ave & W. Perkins Ave
McFarland, CA 93250**

Pipe Size: **18" VCP**

Time Period: **7/26/2023 - 12:00 a.m. to
8/9/2023 - 12:00 a.m.**

GPS: **35.681623, -119.240883**



Manhole - Layout



- Manhole walls and base are concrete with the 18" VCP line continuous through the manhole.
- The VCP trough does show a few breaks and splits.

Equipment

Teledyne Isco 2150 Area Velocity Flow Meter with 10' measuring range:

Level Measurement:

- Method - Submerged pressure transducer mounted in the flow stream
- Transducer Type - Differential linear integrated circuit pressure transducer
- Range (standard) 0.033 to 10 ft (0.010 to 3.05 m); Maximum Allowable Level 34 ft (10.5 m)
- Accuracy ± 0.01 ft from 0.033 to 10 ft, (± 0.003 m from 0.01 to 3.05 m,)
- Long-Term Stability ± 0.023 ft/yr (± 0.007 m/yr)
- Compensated Range 32° to 122°F (0° to 50°C)

Velocity Measurement:

- Method - Doppler ultrasonic, frequency 500 kHz
- Typical Minimum Depth 0.08 ft (25 mm)
- Range -5 to +20 ft/s (-1.5 to +6.1 m/s)
- Accuracy (in water with uniform velocity profile, speed of sound = 4850 ft/s, for indicated velocity range) ± 0.1 ft/s from -5 to 5 ft/s (± 0.03 m/s from— 1.5 to +1.5 m/s)
- $\pm 2\%$ of reading from 5 to 20 ft/s (1.5 to 6.1 m/s)

Method Of Insertion:

- 18 inch line requires confined space entry for installation of ring and transducer.

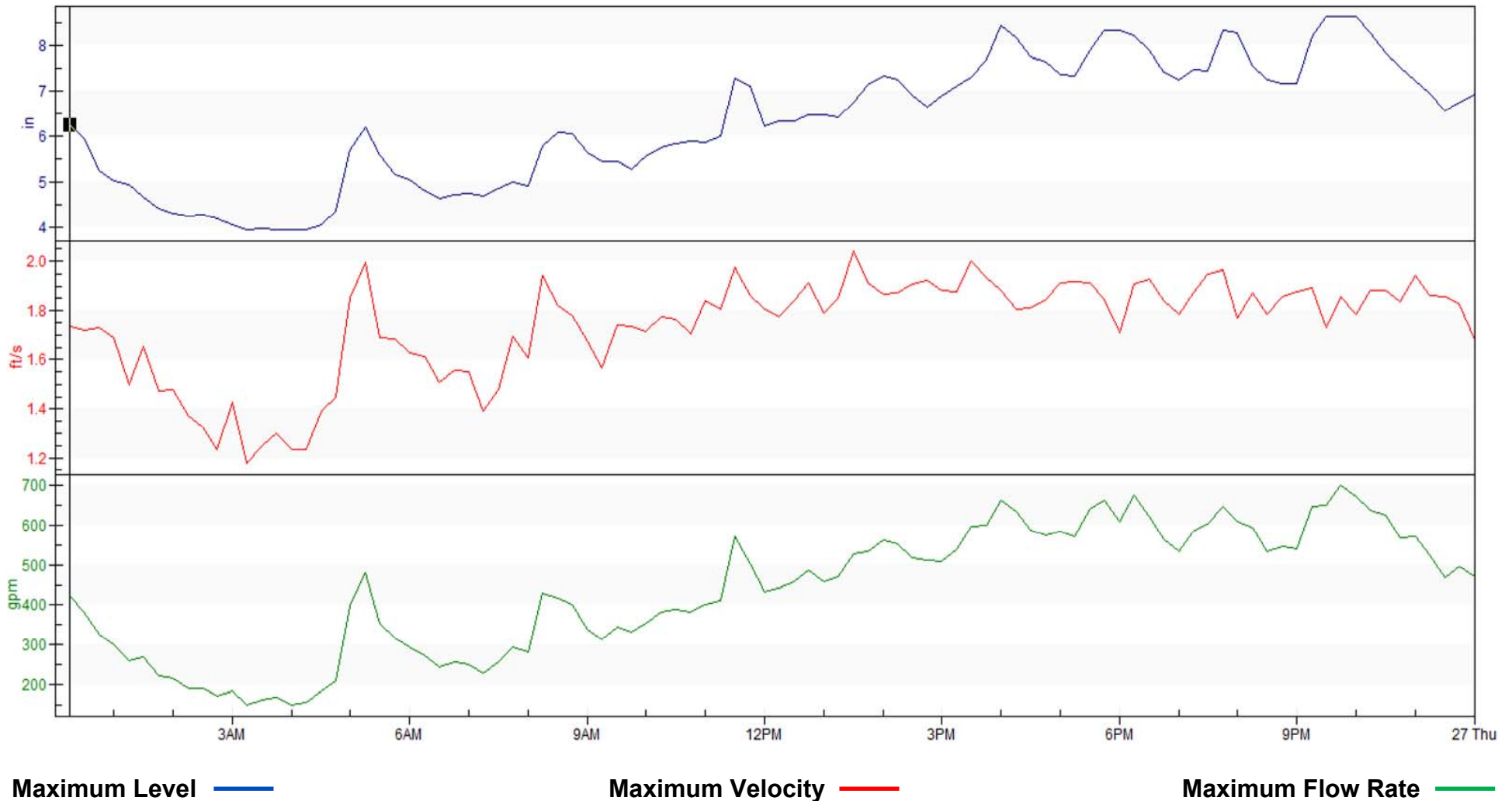


Gold Coast Environmental

Specializing in process instrumentation and calibration.



MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/26/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Wednesday - A.M. 7/26/2023

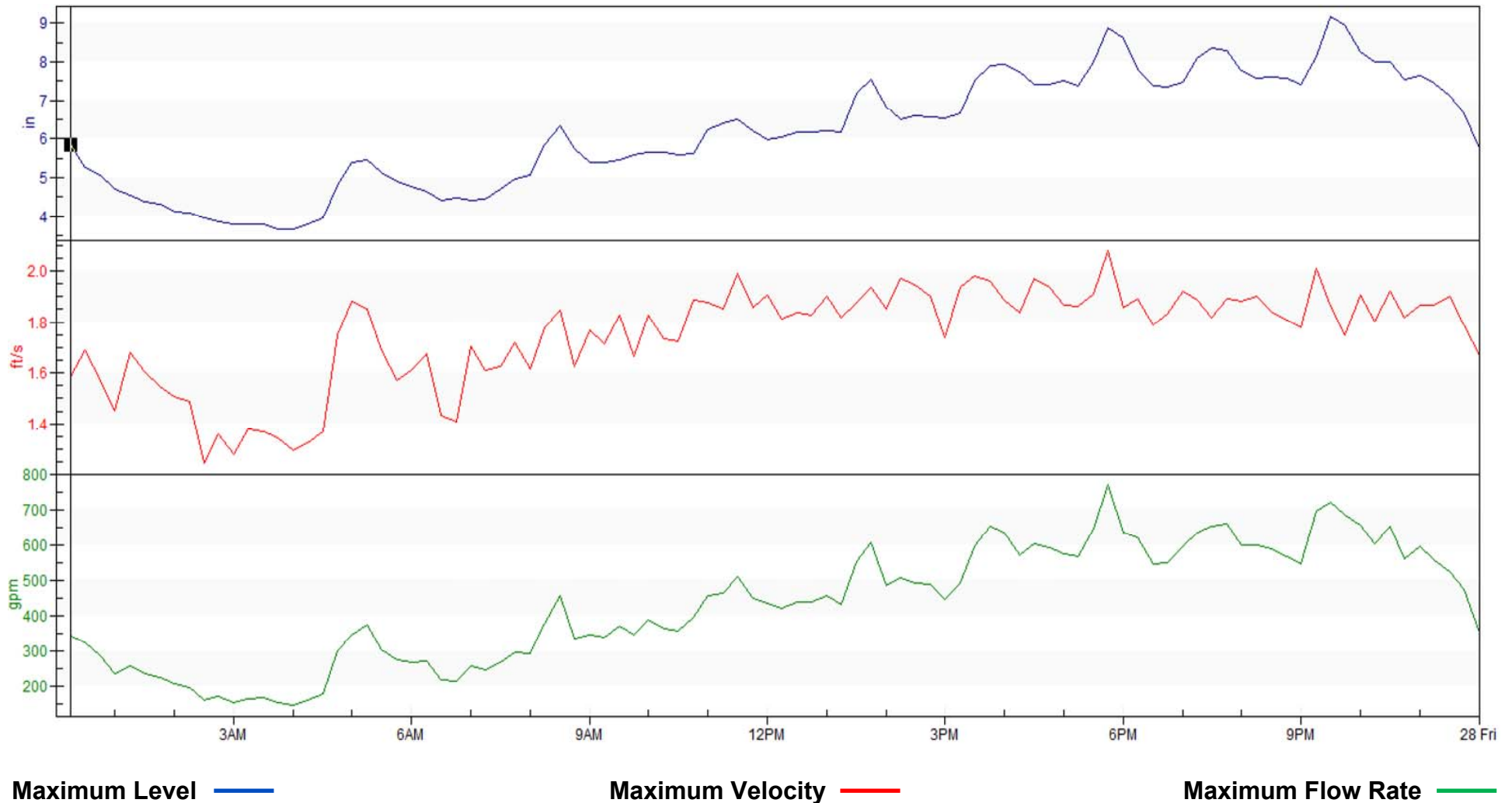
Time	Level	Velocity	Flow
12:15:00 AM	6.238	1.735	423.397
12:30:00 AM	5.957	1.72	383.833
12:45:00 AM	5.255	1.727	326.55
1:00:00 AM	5.039	1.686	301.164
1:15:00 AM	4.951	1.501	258.732
1:30:00 AM	4.666	1.654	269.956
1:45:00 AM	4.417	1.472	222.36
2:00:00 AM	4.303	1.48	215.396
2:15:00 AM	4.266	1.374	192.407
2:30:00 AM	4.294	1.324	191.99
2:45:00 AM	4.189	1.232	172.596
3:00:00 AM	4.051	1.426	183.706
3:15:00 AM	3.95	1.177	151.814
3:30:00 AM	3.965	1.251	162.178
3:45:00 AM	3.954	1.3	167.88
4:00:00 AM	3.956	1.233	150.993
4:15:00 AM	3.946	1.234	155.055
4:30:00 AM	4.055	1.391	186.165
4:45:00 AM	4.363	1.45	209.174
5:00:00 AM	5.698	1.853	399.42
5:15:00 AM	6.198	1.993	479.383
5:30:00 AM	5.584	1.687	353.739
5:45:00 AM	5.176	1.685	317.983
6:00:00 AM	5.045	1.626	294.923
6:15:00 AM	4.795	1.613	273.571
6:30:00 AM	4.648	1.511	245.197
6:45:00 AM	4.716	1.557	257.607
7:00:00 AM	4.75	1.552	251.428
7:15:00 AM	4.695	1.391	228.94
7:30:00 AM	4.871	1.48	256.602
7:45:00 AM	4.992	1.691	294.972
8:00:00 AM	4.913	1.609	280.714
8:15:00 AM	5.788	1.945	428.376
8:30:00 AM	6.096	1.819	417.851
8:45:00 AM	6.067	1.781	401.39
9:00:00 AM	5.634	1.674	339.896
9:15:00 AM	5.448	1.564	313.907
9:30:00 AM	5.445	1.741	344.436
9:45:00 AM	5.291	1.736	330.829
10:00:00 AM	5.545	1.713	355.588
10:15:00 AM	5.746	1.773	381.263
10:30:00 AM	5.848	1.768	389.807
10:45:00 AM	5.878	1.705	382.873
11:00:00 AM	5.855	1.844	401.712
11:15:00 AM	5.999	1.804	409.847
11:30:00 AM	7.274	1.973	571.749
11:45:00 AM	7.109	1.86	501.477

Wednesday - P.M. 7/26/2023

Time	Level	Velocity	Flow
12:00:00 PM	6.226	1.804	432.16
12:15:00 PM	6.341	1.777	443.568
12:30:00 PM	6.323	1.841	457.818
12:45:00 PM	6.469	1.914	486.575
1:00:00 PM	6.468	1.791	459.296
1:15:00 PM	6.42	1.851	469.914
1:30:00 PM	6.74	2.041	528.498
1:45:00 PM	7.134	1.915	534.883
2:00:00 PM	7.337	1.87	560.747
2:15:00 PM	7.239	1.87	552.158
2:30:00 PM	6.921	1.906	518.77
2:45:00 PM	6.649	1.925	510.085
3:00:00 PM	6.893	1.884	508.481
3:15:00 PM	7.112	1.877	538.179
3:30:00 PM	7.292	1.998	594.988
3:45:00 PM	7.699	1.934	598.97
4:00:00 PM	8.431	1.885	662.647
4:15:00 PM	8.171	1.806	632.485
4:30:00 PM	7.76	1.813	587.856
4:45:00 PM	7.648	1.849	575.453
5:00:00 PM	7.359	1.911	582.606
5:15:00 PM	7.32	1.919	570.866
5:30:00 PM	7.89	1.915	639.068
5:45:00 PM	8.329	1.848	663.414
6:00:00 PM	8.333	1.709	609.619
6:15:00 PM	8.224	1.907	673.23
6:30:00 PM	7.888	1.928	622.16
6:45:00 PM	7.416	1.844	565.953
7:00:00 PM	7.256	1.784	534.145
7:15:00 PM	7.469	1.872	582.545
7:30:00 PM	7.438	1.95	603.405
7:45:00 PM	8.342	1.967	646.227
8:00:00 PM	8.267	1.771	609.221
8:15:00 PM	7.564	1.871	591.794
8:30:00 PM	7.255	1.788	534.725
8:45:00 PM	7.161	1.859	546.801
9:00:00 PM	7.17	1.876	539.103
9:15:00 PM	8.183	1.895	645.312
9:30:00 PM	8.638	1.727	649.936
9:45:00 PM	8.638	1.858	699.025
10:00:00 PM	8.635	1.784	670.903
10:15:00 PM	8.275	1.885	635.791
10:30:00 PM	7.842	1.882	624.501
10:45:00 PM	7.528	1.836	566.578
11:00:00 PM	7.208	1.943	571.76
11:15:00 PM	6.934	1.864	525.227
11:30:00 PM	6.546	1.855	466.092
11:45:00 PM	6.759	1.827	497.22

	Inches	Feet/Sec	GPM
Daily Avg:	6.295	1.736	437.385
Daily Min:	3.946	1.177	150.993
Daily Max:	8.638	2.041	699.025
Peak to Avg:			1.60

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/27/2023, 12:00 a.m. - 12:00 p.m.**

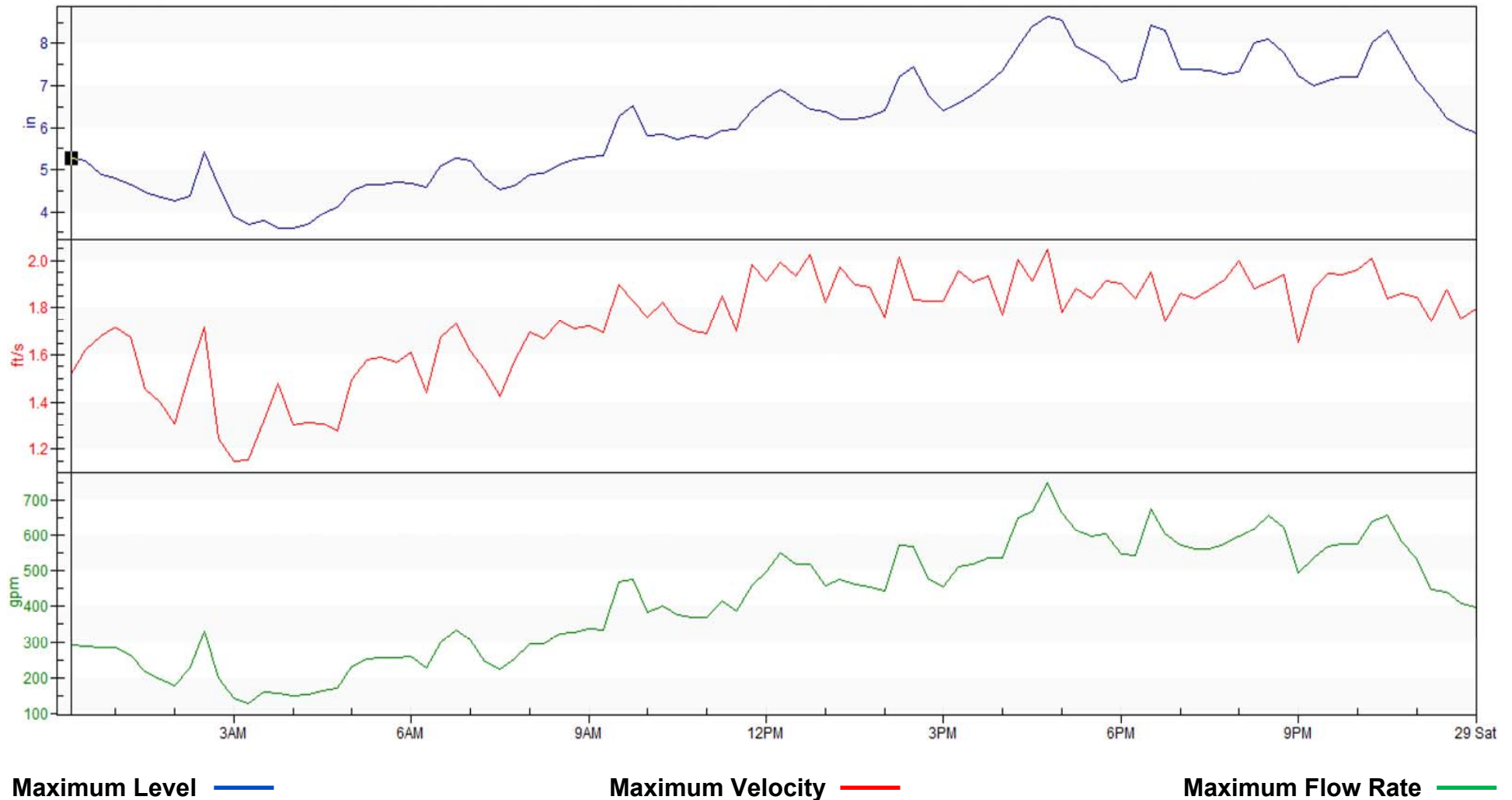
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Thursday - A.M. 7/27/2023

Thursday - P.M. 7/27/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	6.908	1.679	470.478	12:00:00 PM	5.966	1.907	437.183
12:15:00 AM	5.834	1.587	343.865	12:15:00 PM	6.054	1.814	422.367
12:30:00 AM	5.245	1.691	325.027	12:30:00 PM	6.169	1.839	438.308
12:45:00 AM	5.05	1.573	286.784	12:45:00 PM	6.158	1.828	438.322
1:00:00 AM	4.701	1.454	235.937	1:00:00 PM	6.207	1.903	459.243
1:15:00 AM	4.535	1.679	256.305	1:15:00 PM	6.181	1.817	433.185
1:30:00 AM	4.384	1.606	236.007	1:30:00 PM	7.178	1.878	554.102
1:45:00 AM	4.325	1.547	223.453	1:45:00 PM	7.528	1.933	607.762
2:00:00 AM	4.135	1.508	207.541	2:00:00 PM	6.826	1.85	487.656
2:15:00 AM	4.074	1.49	196.692	2:15:00 PM	6.492	1.972	507.169
2:30:00 AM	3.946	1.246	158.556	2:30:00 PM	6.586	1.944	492.669
2:45:00 AM	3.869	1.358	170.032	2:45:00 PM	6.579	1.9	491.024
3:00:00 AM	3.803	1.279	153.423	3:00:00 PM	6.522	1.738	447.86
3:15:00 AM	3.788	1.381	164.739	3:15:00 PM	6.663	1.937	492.01
3:30:00 AM	3.783	1.369	165.954	3:30:00 PM	7.522	1.979	597.041
3:45:00 AM	3.664	1.346	153.039	3:45:00 PM	7.89	1.961	655.926
4:00:00 AM	3.668	1.294	146.304	4:00:00 PM	7.944	1.885	636.279
4:15:00 AM	3.786	1.326	160.898	4:15:00 PM	7.74	1.839	573.911
4:30:00 AM	3.971	1.367	177.629	4:30:00 PM	7.419	1.97	603.839
4:45:00 AM	4.819	1.751	298.912	4:45:00 PM	7.394	1.934	593.664
5:00:00 AM	5.397	1.884	347.586	5:00:00 PM	7.515	1.865	576.778
5:15:00 AM	5.462	1.85	374.345	5:15:00 PM	7.373	1.864	569.299
5:30:00 AM	5.129	1.691	302.683	5:30:00 PM	7.992	1.911	649.191
5:45:00 AM	4.916	1.57	272.845	5:45:00 PM	8.886	2.079	772.214
6:00:00 AM	4.779	1.612	267.712	6:00:00 PM	8.602	1.857	638.099
6:15:00 AM	4.655	1.673	272.077	6:15:00 PM	7.81	1.889	623.48
6:30:00 AM	4.403	1.434	215.567	6:30:00 PM	7.378	1.789	547.576
6:45:00 AM	4.488	1.41	214.784	6:45:00 PM	7.342	1.83	552.417
7:00:00 AM	4.422	1.704	257.75	7:00:00 PM	7.477	1.922	598.644
7:15:00 AM	4.456	1.612	245.27	7:15:00 PM	8.091	1.885	637.269
7:30:00 AM	4.714	1.626	269.102	7:30:00 PM	8.353	1.818	654.951
7:45:00 AM	4.957	1.717	295.96	7:45:00 PM	8.303	1.891	663.389
8:00:00 AM	5.063	1.617	292.188	8:00:00 PM	7.76	1.882	602.239
8:15:00 AM	5.836	1.779	378.609	8:15:00 PM	7.578	1.902	601.921
8:30:00 AM	6.328	1.848	457.594	8:30:00 PM	7.614	1.844	588.503
8:45:00 AM	5.745	1.626	334.912	8:45:00 PM	7.56	1.806	568.992
9:00:00 AM	5.405	1.77	347.326	9:00:00 PM	7.41	1.778	547.21
9:15:00 AM	5.388	1.713	340.81	9:15:00 PM	8.118	2.008	697.322
9:30:00 AM	5.446	1.826	369.81	9:30:00 PM	9.169	1.864	721.718
9:45:00 AM	5.577	1.666	345.028	9:45:00 PM	8.944	1.748	687.776
10:00:00 AM	5.66	1.825	389.807	10:00:00 PM	8.244	1.906	658.828
10:15:00 AM	5.667	1.733	362.975	10:15:00 PM	7.98	1.801	604.914
10:30:00 AM	5.577	1.725	356.218	10:30:00 PM	7.999	1.922	654.453
10:45:00 AM	5.616	1.885	398.012	10:45:00 PM	7.552	1.818	562.356
11:00:00 AM	6.252	1.876	459.247	11:00:00 PM	7.63	1.865	596.732
11:15:00 AM	6.412	1.852	464.207	11:15:00 PM	7.431	1.867	556.361
11:30:00 AM	6.509	1.991	511.933	11:30:00 PM	7.13	1.901	525.528
11:45:00 AM	6.207	1.859	450.639	11:45:00 PM	6.648	1.786	475.205
				Inches	Feet/Sec	GPM	
				Daily Avg:	6.197	1.751	433.252
				Daily Min:	3.664	1.246	146.304
				Daily Max:	9.169	2.079	772.214
				Peak to Avg:			1.78

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/28/2023, 12:00 a.m. - 12:00 p.m.**

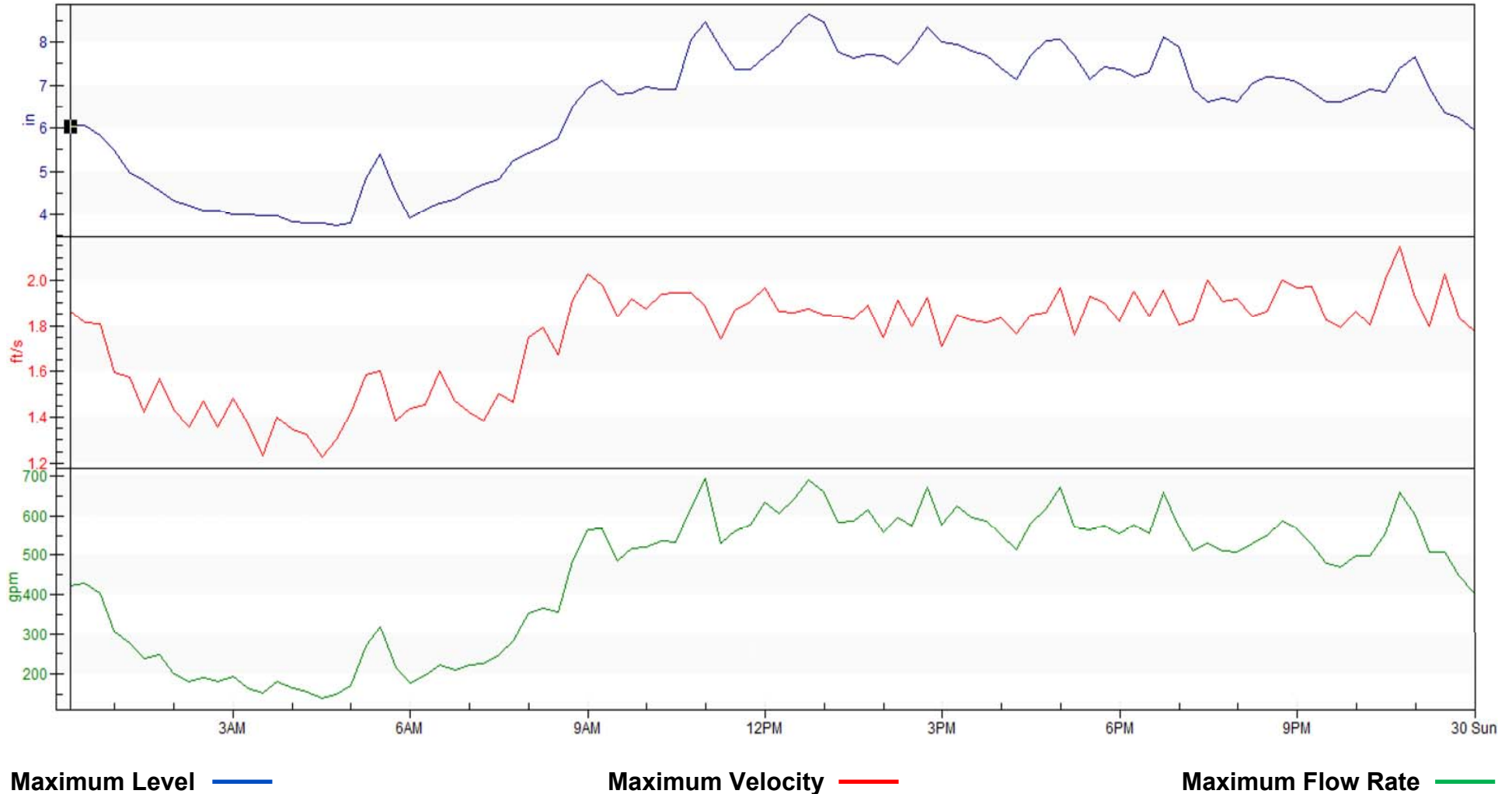
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Friday - A.M. 7/28/2023

Friday - P.M. 7/28/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	5.734	1.67	353.571	12:00:00 PM	6.693	1.914	495.498
12:15:00 AM	5.274	1.521	289.905	12:15:00 PM	6.911	1.995	548.977
12:30:00 AM	5.203	1.623	286.463	12:30:00 PM	6.685	1.935	518.836
12:45:00 AM	4.873	1.679	283.518	12:45:00 PM	6.444	2.027	517.242
1:00:00 AM	4.801	1.714	285.686	1:00:00 PM	6.382	1.821	458.507
1:15:00 AM	4.634	1.675	263.976	1:15:00 PM	6.196	1.971	476.678
1:30:00 AM	4.453	1.458	217.905	1:30:00 PM	6.202	1.899	459.737
1:45:00 AM	4.348	1.398	195.327	1:45:00 PM	6.258	1.885	452.732
2:00:00 AM	4.259	1.306	177.628	2:00:00 PM	6.403	1.761	444.28
2:15:00 AM	4.377	1.53	228.119	2:15:00 PM	7.204	2.013	571.862
2:30:00 AM	5.406	1.715	328.619	2:30:00 PM	7.446	1.832	567.531
2:45:00 AM	4.619	1.242	199.774	2:45:00 PM	6.753	1.831	477.076
3:00:00 AM	3.862	1.148	143.273	3:00:00 PM	6.393	1.828	454.253
3:15:00 AM	3.703	1.151	128.91	3:15:00 PM	6.573	1.954	512.107
3:30:00 AM	3.783	1.318	159.712	3:30:00 PM	6.786	1.908	517.156
3:45:00 AM	3.601	1.478	157.489	3:45:00 PM	7.056	1.934	536.765
4:00:00 AM	3.609	1.302	147.603	4:00:00 PM	7.346	1.769	534.041
4:15:00 AM	3.69	1.313	152.867	4:15:00 PM	7.927	2.003	649.354
4:30:00 AM	3.955	1.309	164.309	4:30:00 PM	8.391	1.912	666.41
4:45:00 AM	4.097	1.274	171.268	4:45:00 PM	8.642	2.047	747.62
5:00:00 AM	4.498	1.494	231.544	5:00:00 PM	8.563	1.78	662.41
5:15:00 AM	4.658	1.578	253.898	5:15:00 PM	7.918	1.88	612.704
5:30:00 AM	4.639	1.591	257.414	5:30:00 PM	7.742	1.841	596.719
5:45:00 AM	4.719	1.567	256.231	5:45:00 PM	7.528	1.915	601.851
6:00:00 AM	4.688	1.612	260.298	6:00:00 PM	7.09	1.904	547.783
6:15:00 AM	4.577	1.44	227.191	6:15:00 PM	7.178	1.841	543.15
6:30:00 AM	5.105	1.672	298.822	6:30:00 PM	8.436	1.953	675.692
6:45:00 AM	5.266	1.731	334.504	6:45:00 PM	8.316	1.743	604.834
7:00:00 AM	5.204	1.616	304.379	7:00:00 PM	7.389	1.86	570.381
7:15:00 AM	4.787	1.536	246.25	7:15:00 PM	7.385	1.841	561.83
7:30:00 AM	4.54	1.425	222.935	7:30:00 PM	7.348	1.878	560.974
7:45:00 AM	4.621	1.572	253.022	7:45:00 PM	7.269	1.919	575.604
8:00:00 AM	4.879	1.695	293.283	8:00:00 PM	7.321	2	595.354
8:15:00 AM	4.913	1.671	293.15	8:15:00 PM	8.015	1.882	616.698
8:30:00 AM	5.109	1.742	322.713	8:30:00 PM	8.105	1.908	655.73
8:45:00 AM	5.248	1.713	326.264	8:45:00 PM	7.77	1.94	621.542
9:00:00 AM	5.305	1.724	336.547	9:00:00 PM	7.237	1.651	492.349
9:15:00 AM	5.332	1.696	333.479	9:15:00 PM	7.009	1.881	536.505
9:30:00 AM	6.27	1.899	466.904	9:30:00 PM	7.126	1.944	568.035
9:45:00 AM	6.518	1.829	473.905	9:45:00 PM	7.211	1.938	575.391
10:00:00 AM	5.822	1.761	382.77	10:00:00 PM	7.204	1.963	575.616
10:15:00 AM	5.833	1.824	401.681	10:15:00 PM	8.007	2.007	637.162
10:30:00 AM	5.733	1.738	377.758	10:30:00 PM	8.313	1.837	657.685
10:45:00 AM	5.795	1.699	370.222	10:45:00 PM	7.739	1.862	582.743
11:00:00 AM	5.746	1.688	368.217	11:00:00 PM	7.12	1.847	532.779
11:15:00 AM	5.922	1.851	413.984	11:15:00 PM	6.732	1.743	448.161
11:30:00 AM	5.944	1.703	385.354	11:30:00 PM	6.214	1.875	440.81
11:45:00 AM	6.393	1.983	458.974	11:45:00 PM	6.023	1.754	408.06
				Inches Feet/Sec GPM			
Daily Avg:				6.091	1.735	418.940	
Daily Min:				3.601	1.148	128.91	
Daily Max:				8.642	2.047	747.62	
Peak to Avg:						1.78	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/29/2023, 12:00 a.m. - 12:00 p.m.**

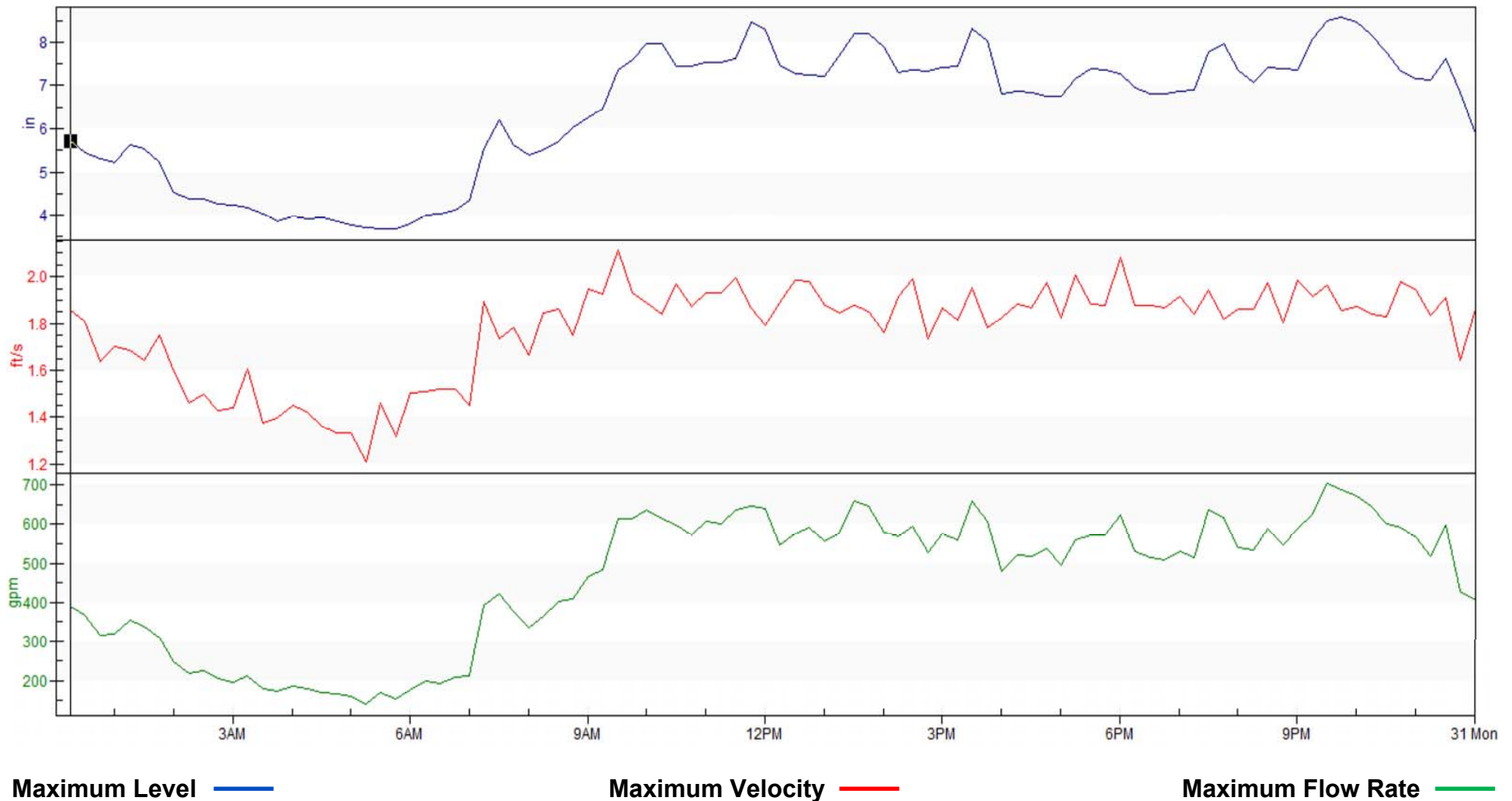
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Saturday - A.M. 7/29/2023

Saturday - P.M. 7/29/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	5.869	1.796	396.363	12:00:00 PM	7.666	1.968	633.649
12:15:00 AM	6.041	1.864	422.562	12:15:00 PM	7.913	1.863	605.943
12:30:00 AM	6.073	1.817	427.51	12:30:00 PM	8.361	1.859	643.848
12:45:00 AM	5.837	1.81	403.305	12:45:00 PM	8.642	1.873	691.216
1:00:00 AM	5.466	1.595	306.414	1:00:00 PM	8.46	1.849	658.744
1:15:00 AM	4.965	1.577	276.773	1:15:00 PM	7.76	1.844	584.768
1:30:00 AM	4.782	1.423	240.413	1:30:00 PM	7.626	1.833	586.084
1:45:00 AM	4.562	1.57	248.158	1:45:00 PM	7.716	1.89	613.865
2:00:00 AM	4.306	1.433	200.619	2:00:00 PM	7.672	1.749	558.385
2:15:00 AM	4.204	1.355	181.212	2:15:00 PM	7.474	1.914	596.031
2:30:00 AM	4.098	1.469	191.422	2:30:00 PM	7.815	1.796	575.261
2:45:00 AM	4.075	1.355	181.72	2:45:00 PM	8.352	1.922	671.715
3:00:00 AM	4.002	1.481	194.588	3:00:00 PM	8.012	1.709	576.028
3:15:00 AM	4.008	1.377	165.97	3:15:00 PM	7.932	1.85	623.018
3:30:00 AM	3.986	1.229	153.367	3:30:00 PM	7.804	1.826	596.547
3:45:00 AM	3.983	1.401	182.793	3:45:00 PM	7.684	1.812	585.386
4:00:00 AM	3.823	1.346	165.583	4:00:00 PM	7.381	1.835	550.848
4:15:00 AM	3.799	1.322	158.205	4:15:00 PM	7.147	1.766	515.349
4:30:00 AM	3.792	1.225	141.605	4:30:00 PM	7.679	1.848	578.905
4:45:00 AM	3.739	1.299	149.241	4:45:00 PM	8.041	1.856	617.379
5:00:00 AM	3.804	1.419	172.243	5:00:00 PM	8.07	1.966	672.791
5:15:00 AM	4.831	1.585	271.647	5:15:00 PM	7.69	1.763	569.705
5:30:00 AM	5.391	1.599	319.32	5:30:00 PM	7.145	1.929	565.574
5:45:00 AM	4.516	1.386	215.955	5:45:00 PM	7.426	1.902	572.659
6:00:00 AM	3.928	1.437	178.615	6:00:00 PM	7.366	1.82	554.898
6:15:00 AM	4.107	1.453	197.988	6:15:00 PM	7.193	1.948	576.429
6:30:00 AM	4.251	1.6	224.542	6:30:00 PM	7.298	1.843	555.998
6:45:00 AM	4.346	1.471	209.801	6:45:00 PM	8.129	1.954	657.851
7:00:00 AM	4.561	1.423	222.43	7:00:00 PM	7.897	1.806	570.056
7:15:00 AM	4.684	1.383	226.807	7:15:00 PM	6.896	1.826	510.622
7:30:00 AM	4.803	1.502	248.163	7:30:00 PM	6.624	2	529.708
7:45:00 AM	5.253	1.468	281.706	7:45:00 PM	6.704	1.909	511.754
8:00:00 AM	5.42	1.752	352.311	8:00:00 PM	6.616	1.916	506.613
8:15:00 AM	5.576	1.791	366.577	8:15:00 PM	7.052	1.843	530.275
8:30:00 AM	5.782	1.672	355.768	8:30:00 PM	7.199	1.864	550.019
8:45:00 AM	6.499	1.914	485.166	8:45:00 PM	7.157	1.998	587.235
9:00:00 AM	6.938	2.026	563.254	9:00:00 PM	7.071	1.968	569.126
9:15:00 AM	7.093	1.98	566.929	9:15:00 PM	6.842	1.974	527.582
9:30:00 AM	6.798	1.841	486.752	9:30:00 PM	6.605	1.823	479.191
9:45:00 AM	6.827	1.917	518.122	9:45:00 PM	6.616	1.791	471.228
10:00:00 AM	6.951	1.877	520.59	10:00:00 PM	6.768	1.863	496.946
10:15:00 AM	6.898	1.94	537.276	10:15:00 PM	6.904	1.805	498.754
10:30:00 AM	6.899	1.943	532.881	10:30:00 PM	6.842	2.007	555.372
10:45:00 AM	8.059	1.946	621.452	10:45:00 PM	7.398	2.147	659.624
11:00:00 AM	8.479	1.888	693.415	11:00:00 PM	7.664	1.923	601.305
11:15:00 AM	7.843	1.742	528.458	11:15:00 PM	6.93	1.799	506.425
11:30:00 AM	7.375	1.87	562.553	11:30:00 PM	6.345	2.029	506.179
11:45:00 AM	7.371	1.906	577.99	11:45:00 PM	6.225	1.836	446.775
				Inches Feet/Sec GPM			
				Daily Avg: 6.386 1.745 450.882			
				Daily Min: 3.739 1.225 141.605			
				Daily Max: 8.642 2.147 693.415			
				Peak to Avg: 1.54			

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/30/2023, 12:00 a.m. - 12:00 p.m.**

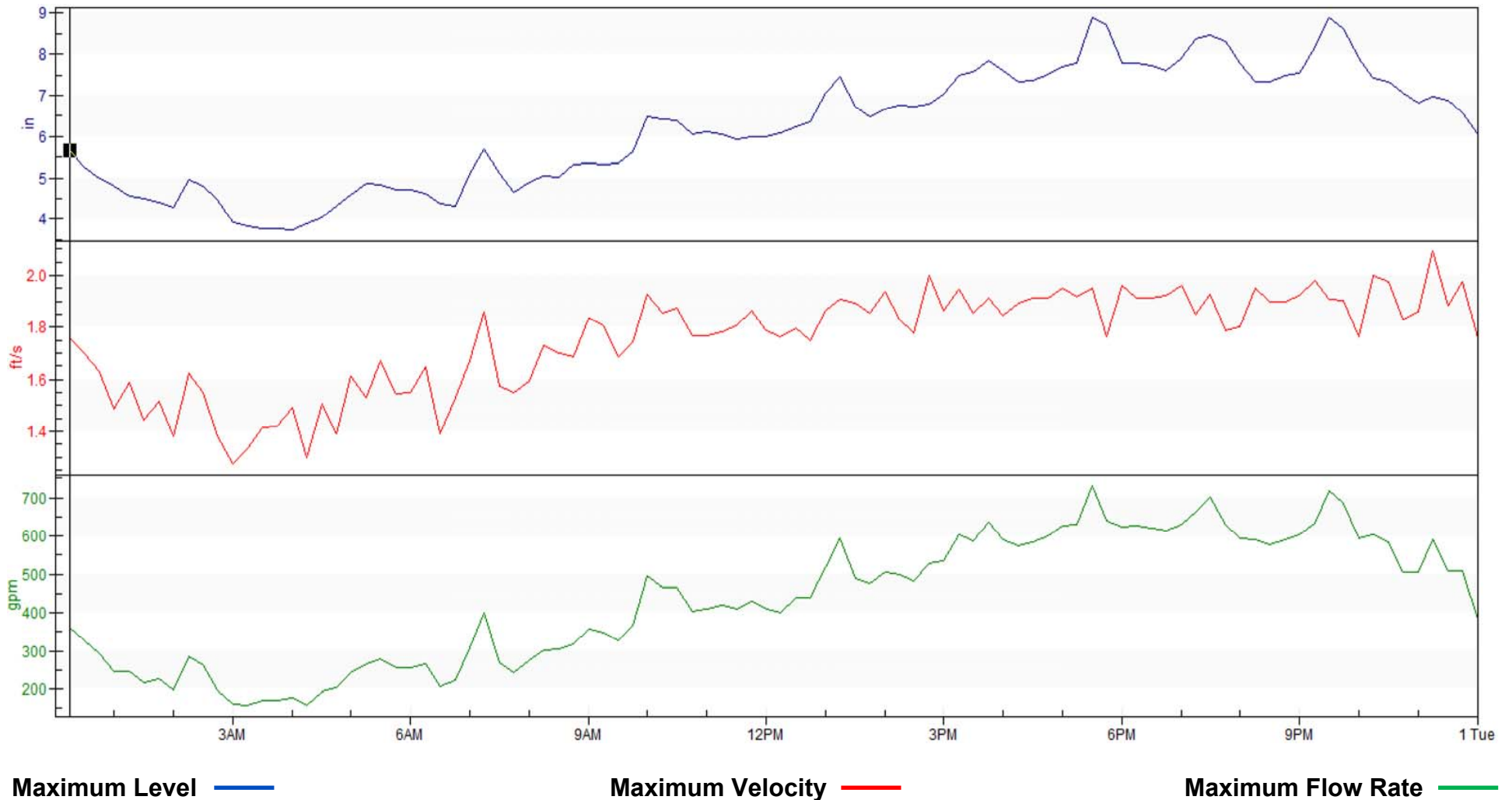
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Sunday - A.M. 7/30/2023

Sunday - P.M. 7/30/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	5.932	1.775	404.297	12:00:00 PM	8.295	1.792	639.839
12:15:00 AM	5.703	1.855	389.358	12:15:00 PM	7.471	1.886	545.723
12:30:00 AM	5.439	1.81	365.859	12:30:00 PM	7.268	1.985	575.711
12:45:00 AM	5.306	1.637	315.802	12:45:00 PM	7.242	1.982	591.725
1:00:00 AM	5.232	1.699	318.964	1:00:00 PM	7.213	1.877	557.485
1:15:00 AM	5.617	1.687	352.674	1:15:00 PM	7.678	1.848	576.534
1:30:00 AM	5.547	1.644	338.336	1:30:00 PM	8.186	1.88	659.817
1:45:00 AM	5.229	1.747	309.587	1:45:00 PM	8.205	1.85	647.18
2:00:00 AM	4.511	1.595	248.149	2:00:00 PM	7.883	1.758	578.567
2:15:00 AM	4.378	1.458	217.434	2:15:00 PM	7.302	1.917	570.193
2:30:00 AM	4.383	1.498	223.779	2:30:00 PM	7.368	1.991	593.553
2:45:00 AM	4.276	1.427	205.9	2:45:00 PM	7.341	1.734	527.022
3:00:00 AM	4.229	1.438	197.685	3:00:00 PM	7.421	1.869	576.37
3:15:00 AM	4.164	1.606	211.128	3:15:00 PM	7.452	1.814	561.252
3:30:00 AM	4.022	1.375	180.132	3:30:00 PM	8.328	1.952	660.152
3:45:00 AM	3.858	1.397	172.226	3:45:00 PM	8.026	1.781	609.15
4:00:00 AM	3.979	1.45	185.716	4:00:00 PM	6.819	1.822	478.199
4:15:00 AM	3.911	1.423	180.846	4:15:00 PM	6.86	1.885	522.639
4:30:00 AM	3.942	1.358	170.967	4:30:00 PM	6.849	1.865	516.577
4:45:00 AM	3.863	1.33	166.133	4:45:00 PM	6.747	1.973	535.747
5:00:00 AM	3.767	1.332	160.498	5:00:00 PM	6.743	1.823	494.68
5:15:00 AM	3.704	1.208	142.121	5:15:00 PM	7.17	2.007	558.369
5:30:00 AM	3.695	1.461	171.19	5:30:00 PM	7.381	1.884	574.193
5:45:00 AM	3.683	1.314	153.361	5:45:00 PM	7.352	1.876	571.442
6:00:00 AM	3.793	1.503	175.591	6:00:00 PM	7.272	2.079	623.999
6:15:00 AM	4.002	1.511	198.438	6:15:00 PM	6.946	1.88	530.884
6:30:00 AM	4.023	1.518	191.801	6:30:00 PM	6.801	1.877	515.099
6:45:00 AM	4.125	1.516	207.904	6:45:00 PM	6.809	1.868	507.27
7:00:00 AM	4.346	1.448	212.108	7:00:00 PM	6.856	1.913	530.863
7:15:00 AM	5.524	1.895	391.426	7:15:00 PM	6.9	1.843	515.677
7:30:00 AM	6.214	1.732	420.547	7:30:00 PM	7.777	1.944	638.008
7:45:00 AM	5.619	1.781	376.714	7:45:00 PM	7.982	1.818	617.509
8:00:00 AM	5.406	1.665	333.147	8:00:00 PM	7.354	1.859	539.838
8:15:00 AM	5.502	1.847	362.78	8:15:00 PM	7.063	1.864	533.949
8:30:00 AM	5.709	1.862	402.492	8:30:00 PM	7.406	1.976	589.332
8:45:00 AM	6.038	1.75	408.555	8:45:00 PM	7.384	1.803	545.786
9:00:00 AM	6.264	1.95	467.508	9:00:00 PM	7.375	1.986	588.369
9:15:00 AM	6.466	1.928	483.451	9:15:00 PM	8.084	1.913	628.262
9:30:00 AM	7.372	2.114	613.972	9:30:00 PM	8.5	1.963	703.799
9:45:00 AM	7.593	1.929	613.274	9:45:00 PM	8.578	1.858	689.47
10:00:00 AM	7.983	1.887	635.85	10:00:00 PM	8.465	1.872	671.999
10:15:00 AM	7.978	1.839	613.418	10:15:00 PM	8.186	1.843	646.719
10:30:00 AM	7.434	1.971	598.377	10:30:00 PM	7.775	1.831	600.76
10:45:00 AM	7.441	1.875	573.605	10:45:00 PM	7.335	1.978	591.897
11:00:00 AM	7.522	1.932	606.784	11:00:00 PM	7.147	1.942	567.565
11:15:00 AM	7.525	1.932	600.503	11:15:00 PM	7.136	1.837	518.763
11:30:00 AM	7.619	1.997	637.929	11:30:00 PM	7.625	1.912	598.394
11:45:00 AM	8.46	1.869	648.037	11:45:00 PM	6.841	1.641	427.692
				Inches Feet/Sec GPM			
Daily Avg:				6.427 1.772 461.011			
Daily Min:				3.683 1.208 142.121			
Daily Max:				8.578 2.114 703.799			
Peak to Avg:				1.53			

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/31/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Monday - A.M. 7/31/2023

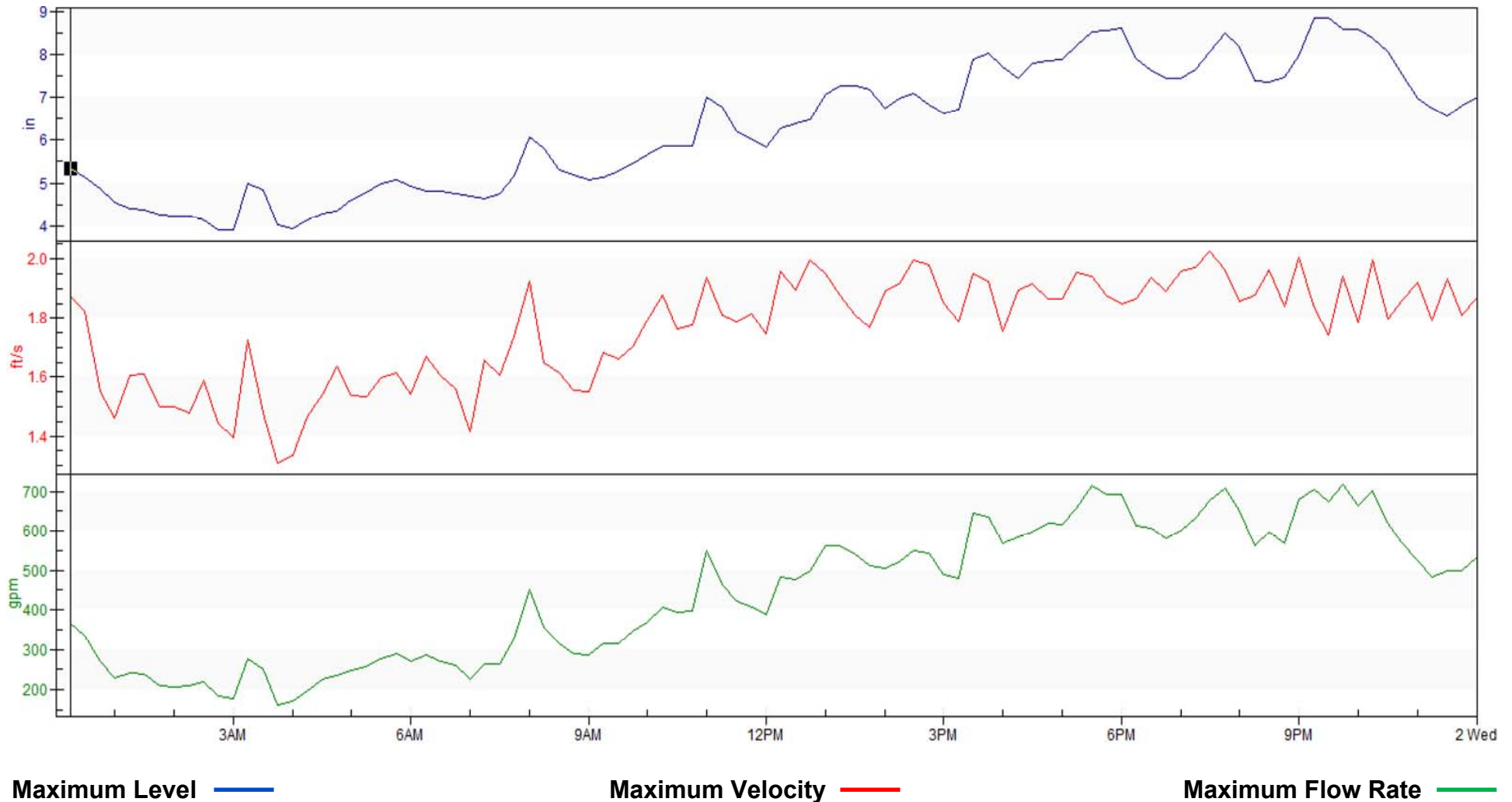
Time	Level	Velocity	Velocity
12:10:00 AM	5.875	1.862	403.946
12:15:00 AM	5.667	1.758	361.615
12:30:00 AM	5.257	1.7	327.748
12:45:00 AM	5.003	1.628	292.84
1:00:00 AM	4.801	1.488	246.999
1:15:00 AM	4.569	1.588	246.743
1:30:00 AM	4.498	1.444	218.192
1:45:00 AM	4.406	1.517	226.125
2:00:00 AM	4.3	1.382	198.376
2:15:00 AM	4.948	1.621	287.12
2:30:00 AM	4.798	1.549	262.743
2:45:00 AM	4.478	1.381	197.897
3:00:00 AM	3.925	1.273	162.689
3:15:00 AM	3.841	1.332	158.603
3:30:00 AM	3.755	1.413	169.471
3:45:00 AM	3.757	1.419	170.325
4:00:00 AM	3.738	1.491	177.692
4:15:00 AM	3.883	1.297	158.653
4:30:00 AM	4.046	1.507	194.096
4:45:00 AM	4.33	1.391	204.208
5:00:00 AM	4.602	1.614	243.182
5:15:00 AM	4.872	1.529	265.161
5:30:00 AM	4.833	1.673	279.804
5:45:00 AM	4.727	1.543	256.37
6:00:00 AM	4.703	1.551	255.852
6:15:00 AM	4.627	1.646	265.44
6:30:00 AM	4.389	1.391	208.191
6:45:00 AM	4.329	1.53	224.665
7:00:00 AM	5.107	1.672	309.65
7:15:00 AM	5.703	1.86	401.548
7:30:00 AM	5.119	1.576	270.809
7:45:00 AM	4.643	1.551	242.821
8:00:00 AM	4.903	1.593	274.606
8:15:00 AM	5.041	1.731	302.855
8:30:00 AM	5.01	1.7	306.46
8:45:00 AM	5.324	1.687	318.068
9:00:00 AM	5.354	1.834	357.667
9:15:00 AM	5.326	1.804	347.412
9:30:00 AM	5.365	1.684	328.26
9:45:00 AM	5.623	1.743	368.845
10:00:00 AM	6.476	1.925	494.483
10:15:00 AM	6.432	1.857	465.755
10:30:00 AM	6.38	1.872	466.194
10:45:00 AM	6.05	1.766	403.976
11:00:00 AM	6.127	1.768	411.239
11:15:00 AM	6.071	1.784	419.562
11:30:00 AM	5.94	1.805	409.865
11:45:00 AM	5.984	1.863	429.579

Monday - P.M. 7/31/2023

Time	Level	Velocity	Flow
12:00:00 PM	6.01	1.787	410.848
12:15:00 PM	6.082	1.764	401.313
12:30:00 PM	6.244	1.796	438.936
12:45:00 PM	6.372	1.746	438.831
1:00:00 PM	7.059	1.865	516.893
1:15:00 PM	7.464	1.906	592.488
1:30:00 PM	6.722	1.896	490.486
1:45:00 PM	6.478	1.857	477.082
2:00:00 PM	6.665	1.936	505.955
2:15:00 PM	6.764	1.832	499.013
2:30:00 PM	6.742	1.776	481.745
2:45:00 PM	6.802	1.999	529.877
3:00:00 PM	7.035	1.866	536.028
3:15:00 PM	7.5	1.947	605.202
3:30:00 PM	7.57	1.857	588.049
3:45:00 PM	7.849	1.911	634.878
4:00:00 PM	7.609	1.848	589.108
4:15:00 PM	7.342	1.896	572.636
4:30:00 PM	7.367	1.913	584.286
4:45:00 PM	7.527	1.914	600.291
5:00:00 PM	7.712	1.95	626.036
5:15:00 PM	7.781	1.919	630.059
5:30:00 PM	8.892	1.952	730.822
5:45:00 PM	8.72	1.762	638.87
6:00:00 PM	7.787	1.962	623.666
6:15:00 PM	7.781	1.913	625.054
6:30:00 PM	7.718	1.911	620.987
6:45:00 PM	7.624	1.924	613.921
7:00:00 PM	7.918	1.963	629.451
7:15:00 PM	8.377	1.848	663.443
7:30:00 PM	8.458	1.926	700.918
7:45:00 PM	8.324	1.789	631.199
8:00:00 PM	7.787	1.804	592.954
8:15:00 PM	7.346	1.954	590.066
8:30:00 PM	7.338	1.899	577.119
8:45:00 PM	7.495	1.898	590.191
9:00:00 PM	7.535	1.921	604.562
9:15:00 PM	8.153	1.981	632.922
9:30:00 PM	8.893	1.909	717.143
9:45:00 PM	8.603	1.905	685.8
10:00:00 PM	7.923	1.765	593.539
10:15:00 PM	7.442	2	603.394
10:30:00 PM	7.326	1.975	583.941
10:45:00 PM	7.06	1.829	505.578
11:00:00 PM	6.81	1.861	504.826
11:15:00 PM	6.968	2.092	589.782
11:30:00 PM	6.868	1.883	508.445
11:45:00 PM	6.589	1.975	509.011

	Inches	Feet/Sec	GPM
Daily Avg:	6.205	1.753	433.769
Daily Min:	3.738	1.273	158.603
Daily Max:	8.893	2.092	730.822
Peak to Avg:			1.68

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/1/2023, 12:00 a.m. - 12:00 p.m.**

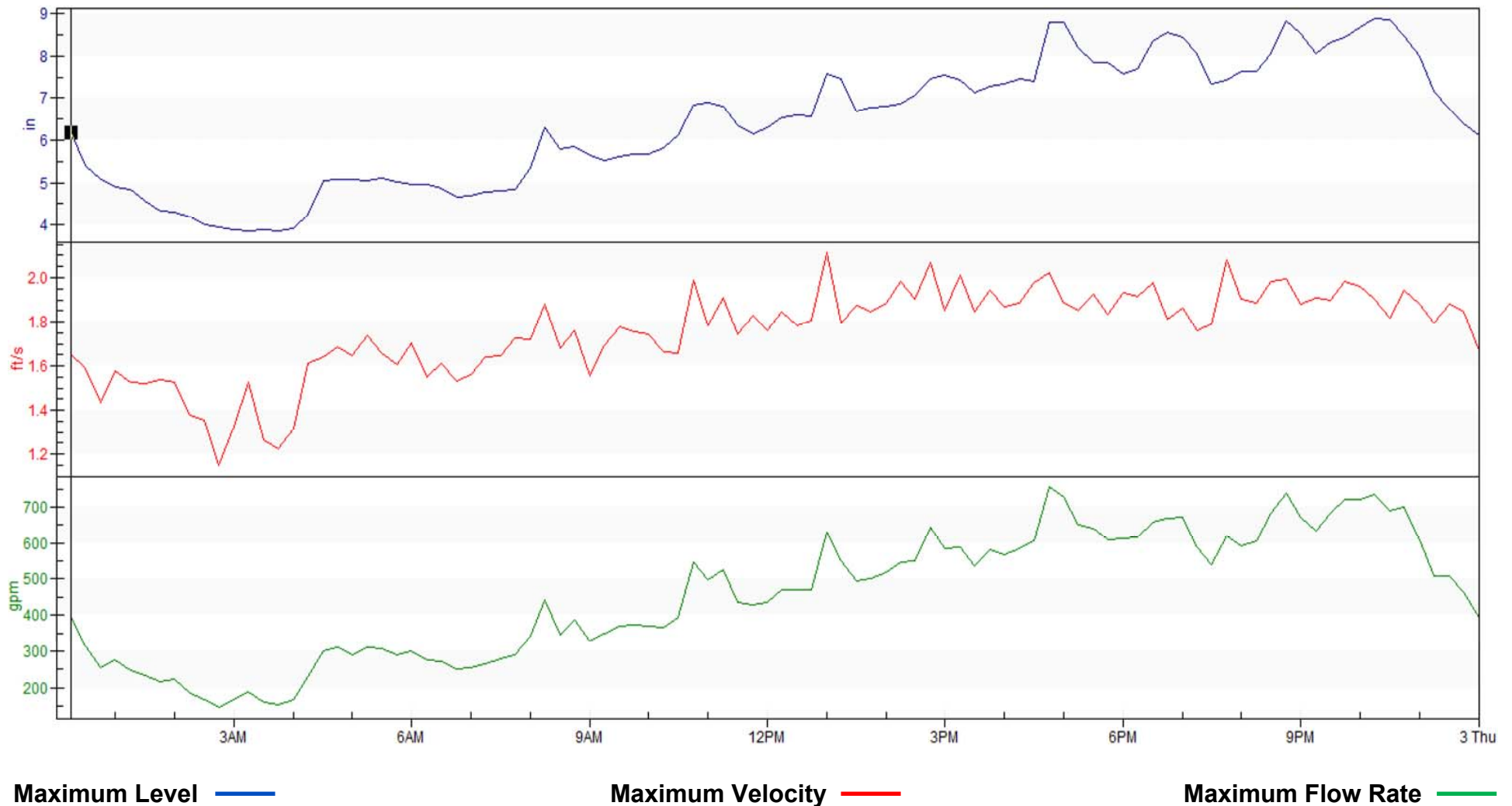
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Tuesday- A.M. 8/1/2023

Tuesday- P.M. 8/1/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	6.06	1.759	383.151	12:00:00 PM	5.823	1.746	386.603
12:15:00 AM	5.347	1.872	365.667	12:15:00 PM	6.276	1.957	481.729
12:30:00 AM	5.12	1.822	333.352	12:30:00 PM	6.398	1.895	475.608
12:45:00 AM	4.864	1.553	268.65	12:45:00 PM	6.484	1.998	499.421
1:00:00 AM	4.541	1.462	228.84	1:00:00 PM	7.066	1.951	563.651
1:15:00 AM	4.411	1.606	241.845	1:15:00 PM	7.269	1.877	561.9
1:30:00 AM	4.384	1.609	239.718	1:30:00 PM	7.271	1.81	539.014
1:45:00 AM	4.252	1.499	210.96	1:45:00 PM	7.18	1.766	510.33
2:00:00 AM	4.241	1.499	207.912	2:00:00 PM	6.738	1.891	504.689
2:15:00 AM	4.227	1.48	210.036	2:15:00 PM	6.966	1.917	522.575
2:30:00 AM	4.133	1.59	218.633	2:30:00 PM	7.077	1.995	549.746
2:45:00 AM	3.905	1.445	183.254	2:45:00 PM	6.816	1.979	544.704
3:00:00 AM	3.91	1.395	177.317	3:00:00 PM	6.631	1.851	488.922
3:15:00 AM	4.979	1.727	276.029	3:15:00 PM	6.713	1.79	480.216
3:30:00 AM	4.851	1.478	251.437	3:30:00 PM	7.865	1.95	646.529
3:45:00 AM	4.036	1.309	162.758	3:45:00 PM	8.017	1.926	636.005
4:00:00 AM	3.929	1.335	170.647	4:00:00 PM	7.706	1.757	569.512
4:15:00 AM	4.144	1.468	195.561	4:15:00 PM	7.452	1.893	584.018
4:30:00 AM	4.297	1.544	224.254	4:30:00 PM	7.799	1.914	597.087
4:45:00 AM	4.355	1.636	234.664	4:45:00 PM	7.85	1.865	618.393
5:00:00 AM	4.61	1.538	246.637	5:00:00 PM	7.883	1.865	617.167
5:15:00 AM	4.77	1.534	258.104	5:15:00 PM	8.192	1.953	658.059
5:30:00 AM	4.986	1.596	275.866	5:30:00 PM	8.523	1.94	715.199
5:45:00 AM	5.072	1.614	287.854	5:45:00 PM	8.547	1.879	692.715
6:00:00 AM	4.915	1.544	270.7	6:00:00 PM	8.615	1.848	691.988
6:15:00 AM	4.824	1.668	285.227	6:15:00 PM	7.912	1.867	611.783
6:30:00 AM	4.798	1.604	269.059	6:30:00 PM	7.61	1.938	607.697
6:45:00 AM	4.75	1.56	260.004	6:45:00 PM	7.455	1.892	580.227
7:00:00 AM	4.707	1.417	226.441	7:00:00 PM	7.443	1.96	599.132
7:15:00 AM	4.645	1.659	262.947	7:15:00 PM	7.657	1.97	633.286
7:30:00 AM	4.757	1.605	264.913	7:30:00 PM	8.042	2.027	677.232
7:45:00 AM	5.175	1.737	327.691	7:45:00 PM	8.504	1.963	707.947
8:00:00 AM	6.066	1.925	451.696	8:00:00 PM	8.183	1.857	651.33
8:15:00 AM	5.816	1.65	356.842	8:15:00 PM	7.368	1.878	562.688
8:30:00 AM	5.31	1.615	314.774	8:30:00 PM	7.361	1.962	598.687
8:45:00 AM	5.182	1.555	288.825	8:45:00 PM	7.474	1.84	568.801
9:00:00 AM	5.088	1.551	284.784	9:00:00 PM	7.963	2.007	679.499
9:15:00 AM	5.128	1.683	313.379	9:15:00 PM	8.842	1.835	704.575
9:30:00 AM	5.289	1.663	316.079	9:30:00 PM	8.843	1.741	672.929
9:45:00 AM	5.466	1.706	347.147	9:45:00 PM	8.571	1.944	717.388
10:00:00 AM	5.656	1.793	367.383	10:00:00 PM	8.586	1.783	663.91
10:15:00 AM	5.87	1.878	408.16	10:15:00 PM	8.388	1.996	702.257
10:30:00 AM	5.867	1.762	395.421	10:30:00 PM	8.066	1.799	619.343
10:45:00 AM	5.856	1.776	397.507	10:45:00 PM	7.537	1.859	567.664
11:00:00 AM	7.015	1.936	549.803	11:00:00 PM	6.965	1.919	525.495
11:15:00 AM	6.755	1.81	462.735	11:15:00 PM	6.738	1.792	483.083
11:30:00 AM	6.212	1.791	421.395	11:30:00 PM	6.551	1.931	498.559
11:45:00 AM	6.009	1.816	406.853	11:45:00 PM	6.812	1.812	498.269
				Inches	Feet/Sec	GPM	
Daily Avg:				6.279	1.759	441.972	
Daily Min:				3.905	1.309	162.758	
Daily Max:				8.843	2.027	717.388	
Peak to Avg:						1.62	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/2/2023, 12:00 a.m. - 12:00 p.m.**

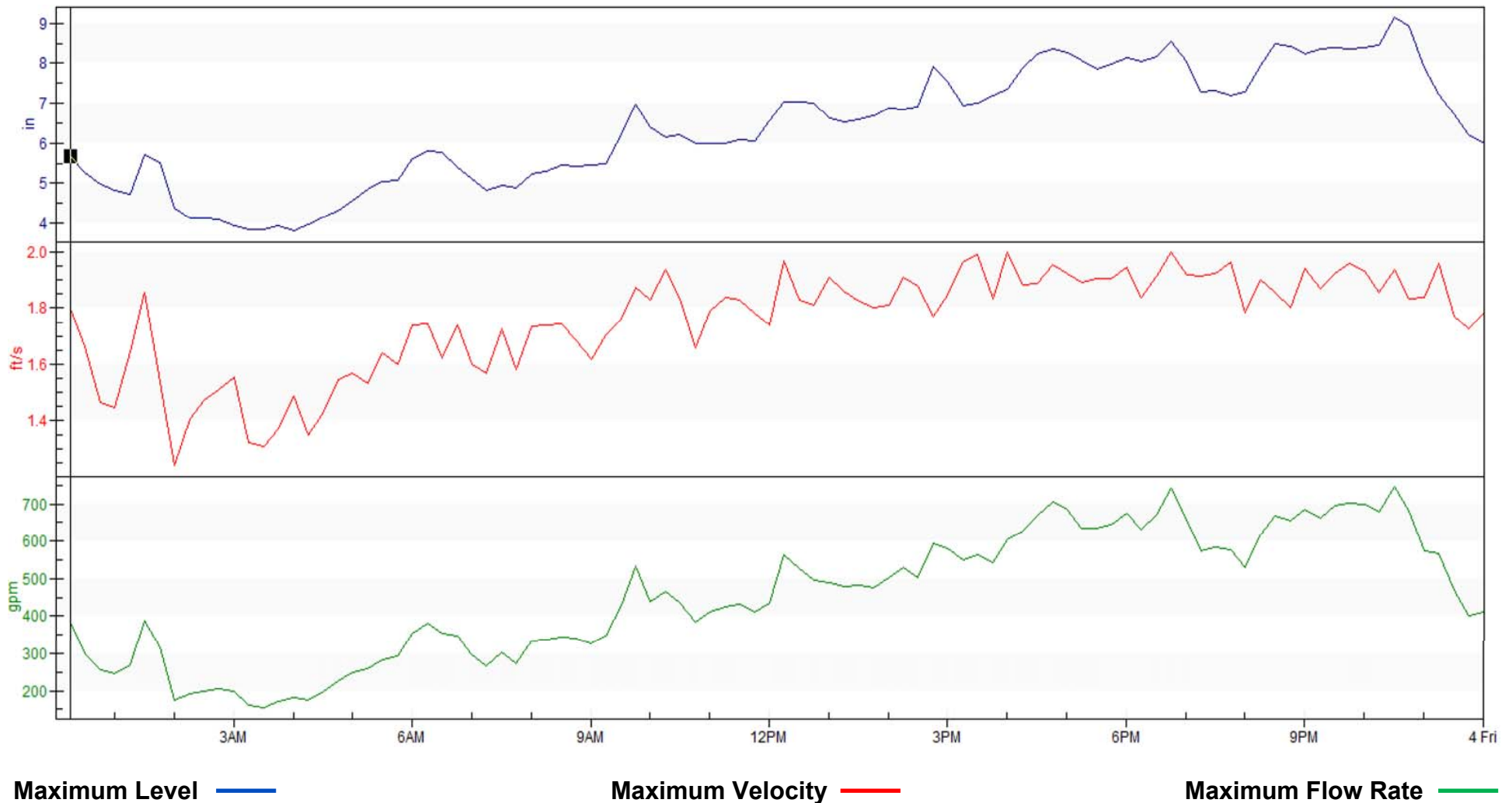
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Wednesday - A.M. 8/2/2023

Wednesday - P.M. 8/2/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	7.012	1.868	534.27	12:00:00 PM	6.298	1.76	435.365
12:15:00 AM	6.17	1.653	397.621	12:15:00 PM	6.528	1.845	470.854
12:30:00 AM	5.412	1.592	313.018	12:30:00 PM	6.59	1.785	469.575
12:45:00 AM	5.082	1.434	254.98	12:45:00 PM	6.559	1.806	471.842
1:00:00 AM	4.911	1.576	276.264	1:00:00 PM	7.567	2.115	630.633
1:15:00 AM	4.826	1.528	246.503	1:15:00 PM	7.448	1.793	551.693
1:30:00 AM	4.574	1.519	233.028	1:30:00 PM	6.695	1.875	495.017
1:45:00 AM	4.321	1.536	217.525	1:45:00 PM	6.776	1.846	501.688
2:00:00 AM	4.306	1.529	222.686	2:00:00 PM	6.802	1.887	517.9
2:15:00 AM	4.198	1.377	184.198	2:15:00 PM	6.857	1.982	546.391
2:30:00 AM	4.007	1.357	169.681	2:30:00 PM	7.074	1.9	549.844
2:45:00 AM	3.953	1.15	148.026	2:45:00 PM	7.464	2.069	643.037
3:00:00 AM	3.896	1.324	167.094	3:00:00 PM	7.556	1.853	585.201
3:15:00 AM	3.857	1.526	190.246	3:15:00 PM	7.42	2.01	588.427
3:30:00 AM	3.894	1.264	159.65	3:30:00 PM	7.14	1.845	535.313
3:45:00 AM	3.872	1.223	153.221	3:45:00 PM	7.291	1.942	582.099
4:00:00 AM	3.915	1.315	167.355	4:00:00 PM	7.329	1.868	566.791
4:15:00 AM	4.235	1.615	229.858	4:15:00 PM	7.449	1.884	583.904
4:30:00 AM	5.056	1.638	299.087	4:30:00 PM	7.398	1.975	606.815
4:45:00 AM	5.076	1.687	309.779	4:45:00 PM	8.792	2.021	754.655
5:00:00 AM	5.078	1.646	288.158	5:00:00 PM	8.801	1.884	726.017
5:15:00 AM	5.058	1.736	311.705	5:15:00 PM	8.198	1.85	650.406
5:30:00 AM	5.104	1.66	306.574	5:30:00 PM	7.841	1.927	639.122
5:45:00 AM	5.019	1.609	290.788	5:45:00 PM	7.856	1.837	611.051
6:00:00 AM	4.959	1.701	300.558	6:00:00 PM	7.583	1.934	613.836
6:15:00 AM	4.97	1.55	276.247	6:15:00 PM	7.695	1.913	616.006
6:30:00 AM	4.871	1.612	272.676	6:30:00 PM	8.357	1.979	658.778
6:45:00 AM	4.675	1.535	250.654	6:45:00 PM	8.561	1.811	668.81
7:00:00 AM	4.679	1.56	255.447	7:00:00 PM	8.449	1.866	672.522
7:15:00 AM	4.795	1.642	265.125	7:15:00 PM	8.047	1.763	587.676
7:30:00 AM	4.797	1.647	278.728	7:30:00 PM	7.328	1.788	540.644
7:45:00 AM	4.832	1.728	288.514	7:45:00 PM	7.413	2.079	621.628
8:00:00 AM	5.36	1.723	341.184	8:00:00 PM	7.628	1.903	591.263
8:15:00 AM	6.298	1.882	442.496	8:15:00 PM	7.647	1.886	605.32
8:30:00 AM	5.801	1.679	346.422	8:30:00 PM	8.063	1.981	681.512
8:45:00 AM	5.856	1.758	387.947	8:45:00 PM	8.819	1.992	739.466
9:00:00 AM	5.652	1.556	327.035	9:00:00 PM	8.539	1.883	672.502
9:15:00 AM	5.531	1.692	350.135	9:15:00 PM	8.043	1.907	633.792
9:30:00 AM	5.623	1.78	370.074	9:30:00 PM	8.331	1.899	681.746
9:45:00 AM	5.66	1.754	374.186	9:45:00 PM	8.425	1.983	722.367
10:00:00 AM	5.666	1.743	368.152	10:00:00 PM	8.665	1.958	722.424
10:15:00 AM	5.831	1.664	367.092	10:15:00 PM	8.884	1.905	735.556
10:30:00 AM	6.105	1.66	393.394	10:30:00 PM	8.844	1.815	688.335
10:45:00 AM	6.819	1.991	548.355	10:45:00 PM	8.458	1.943	701.067
11:00:00 AM	6.893	1.784	497.933	11:00:00 PM	8.001	1.881	610.609
11:15:00 AM	6.814	1.907	524.798	11:15:00 PM	7.149	1.794	508.388
11:30:00 AM	6.353	1.743	435.934	11:30:00 PM	6.733	1.879	508.673
11:45:00 AM	6.152	1.832	427.321	11:45:00 PM	6.392	1.844	465.199
				Inches	Feet/Sec	GPM	
Daily Avg:				6.406	1.755	454.623	
Daily Min:				3.857	1.15	148.026	
Daily Max:				8.884	2.115	754.655	
Peak to Avg:					1.66		

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/3/2023, 12:00 a.m. - 12:00 p.m.**

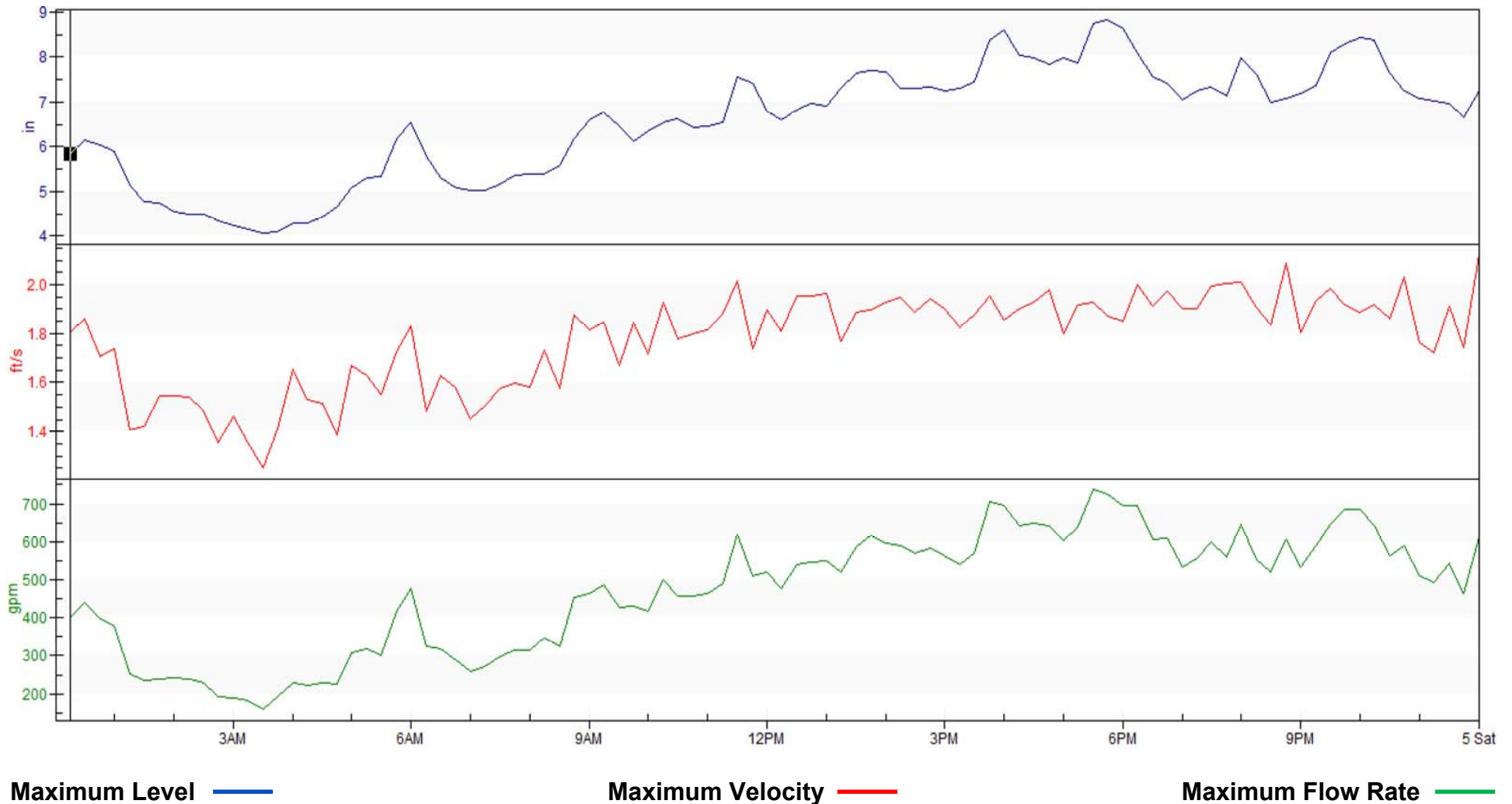
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Thursday - A.M. 8/3/2023

Thursday - P.M. 8/3/2023

Time	Level	Velocity	Flow		Time	Level	Velocity	Flow
12:00:00 AM	6.105	1.668	395.38		12:00:00 PM	6.562	1.741	433.494
12:15:00 AM	5.662	1.798	384.266		12:15:00 PM	7.028	1.97	564.991
12:30:00 AM	5.276	1.663	300.371		12:30:00 PM	7.025	1.83	524.555
12:45:00 AM	4.976	1.467	254.59		12:45:00 PM	6.998	1.813	497.012
1:00:00 AM	4.824	1.448	246.888		1:00:00 PM	6.631	1.908	488.778
1:15:00 AM	4.713	1.645	270.192		1:15:00 PM	6.535	1.862	478.371
1:30:00 AM	5.702	1.855	389.105		1:30:00 PM	6.602	1.826	481.342
1:45:00 AM	5.52	1.538	317.369		1:45:00 PM	6.68	1.804	474.749
2:00:00 AM	4.371	1.24	175.706		2:00:00 PM	6.869	1.812	504.164
2:15:00 AM	4.113	1.409	192.324		2:15:00 PM	6.851	1.909	529.007
2:30:00 AM	4.122	1.475	199.023		2:30:00 PM	6.92	1.877	501.791
2:45:00 AM	4.1	1.512	205.51		2:45:00 PM	7.915	1.771	594.774
3:00:00 AM	3.95	1.553	200.16		3:00:00 PM	7.537	1.848	581.709
3:15:00 AM	3.843	1.322	160.392		3:15:00 PM	6.929	1.962	548.197
3:30:00 AM	3.85	1.306	155.64		3:30:00 PM	7.012	1.989	564.445
3:45:00 AM	3.936	1.369	172.754		3:45:00 PM	7.196	1.836	541.771
4:00:00 AM	3.81	1.487	181.655		4:00:00 PM	7.339	2	604.681
4:15:00 AM	3.969	1.347	173.778		4:15:00 PM	7.881	1.882	628.402
4:30:00 AM	4.161	1.433	198.958		4:30:00 PM	8.239	1.887	667.789
4:45:00 AM	4.324	1.544	226.263		4:45:00 PM	8.371	1.955	706.184
5:00:00 AM	4.572	1.567	248.581		5:00:00 PM	8.273	1.923	684.237
5:15:00 AM	4.854	1.533	259.519		5:15:00 PM	8.068	1.892	635.718
5:30:00 AM	5.046	1.642	284.409		5:30:00 PM	7.866	1.906	634.767
5:45:00 AM	5.067	1.598	292.652		5:45:00 PM	7.968	1.906	645.955
6:00:00 AM	5.605	1.74	353.732		6:00:00 PM	8.15	1.944	673.761
6:15:00 AM	5.797	1.742	381.896		6:15:00 PM	8.056	1.839	631.958
6:30:00 AM	5.757	1.621	354.403		6:30:00 PM	8.162	1.916	669.813
6:45:00 AM	5.393	1.737	347.018		6:45:00 PM	8.547	1.998	741.501
7:00:00 AM	5.102	1.599	295.778		7:00:00 PM	8.05	1.919	658.915
7:15:00 AM	4.813	1.567	264.997		7:15:00 PM	7.28	1.913	572.301
7:30:00 AM	4.956	1.727	304.975		7:30:00 PM	7.319	1.924	582.449
7:45:00 AM	4.892	1.58	272.562		7:45:00 PM	7.206	1.963	575.774
8:00:00 AM	5.243	1.735	333.247	8:00:00 PM	7.301	1.784	529.496	
8:15:00 AM	5.294	1.737	338.201	8:15:00 PM	7.954	1.903	617.024	
8:30:00 AM	5.44	1.745	342.465	8:30:00 PM	8.491	1.854	667.432	
8:45:00 AM	5.425	1.685	339.426	8:45:00 PM	8.426	1.8	655.955	
9:00:00 AM	5.454	1.617	328.172	9:00:00 PM	8.238	1.94	684.019	
9:15:00 AM	5.474	1.702	345.758	9:15:00 PM	8.368	1.868	662.385	
9:30:00 AM	6.212	1.762	427.535	9:30:00 PM	8.383	1.922	695.716	
9:45:00 AM	6.981	1.873	532.386	9:45:00 PM	8.371	1.96	703.019	
10:00:00 AM	6.407	1.829	437.02	10:00:00 PM	8.391	1.931	699.16	
10:15:00 AM	6.157	1.935	463.843	10:15:00 PM	8.447	1.856	678.536	
10:30:00 AM	6.199	1.834	435.738	10:30:00 PM	9.15	1.936	744.869	
10:45:00 AM	6.003	1.659	384.289	10:45:00 PM	8.93	1.835	682.034	
11:00:00 AM	5.983	1.787	412.018	11:00:00 PM	7.886	1.838	572.461	
11:15:00 AM	6	1.839	425.473	11:15:00 PM	7.236	1.961	566.567	
11:30:00 AM	6.08	1.829	430.959	11:30:00 PM	6.729	1.769	467.772	
11:45:00 AM	6.062	1.779	412.039	11:45:00 PM	6.196	1.724	402.895	
					Inches Feet/Sec GPM			
					Daily Avg: 6.408 1.756 454.494			
					Daily Min: 3.81 1.24 155.64			
					Daily Max: 9.15 2 744.869			
					Peak to Avg: 1.64			

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/4/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Friday - A.M. 8/4/2023

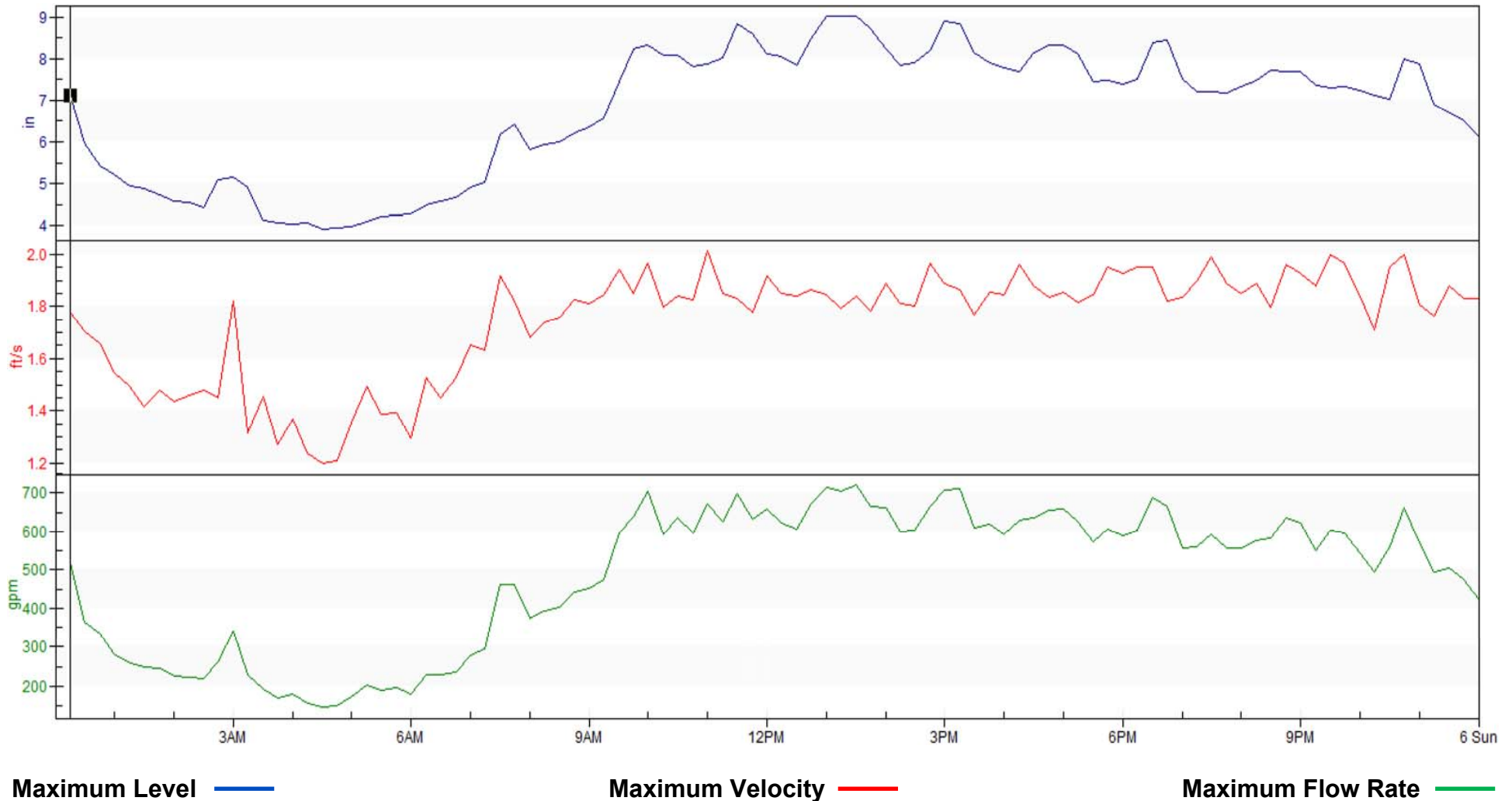
Time	Level	Velocity	Flow
12:00:00 AM	5.976	1.782	410.218
12:15:00 AM	5.829	1.802	400.783
12:30:00 AM	6.163	1.859	440.898
12:45:00 AM	6.031	1.706	397.62
1:00:00 AM	5.887	1.739	376.576
1:15:00 AM	5.148	1.406	251.912
1:30:00 AM	4.771	1.423	234.291
1:45:00 AM	4.732	1.546	239.521
2:00:00 AM	4.549	1.545	243.239
2:15:00 AM	4.492	1.54	238.266
2:30:00 AM	4.481	1.483	228.606
2:45:00 AM	4.356	1.355	190.822
3:00:00 AM	4.237	1.461	188.855
3:15:00 AM	4.16	1.355	181.945
3:30:00 AM	4.062	1.251	160.136
3:45:00 AM	4.103	1.411	191.944
4:00:00 AM	4.293	1.653	230.159
4:15:00 AM	4.284	1.532	221.594
4:30:00 AM	4.419	1.515	229.028
4:45:00 AM	4.651	1.385	225.065
5:00:00 AM	5.091	1.67	307.785
5:15:00 AM	5.315	1.629	318.882
5:30:00 AM	5.326	1.55	301.998
5:45:00 AM	6.186	1.725	416.251
6:00:00 AM	6.553	1.828	477.197
6:15:00 AM	5.774	1.486	326.213
6:30:00 AM	5.311	1.63	318.886
6:45:00 AM	5.07	1.579	288.652
7:00:00 AM	5.013	1.454	258.648
7:15:00 AM	5.02	1.503	270.518
7:30:00 AM	5.172	1.578	297.4
7:45:00 AM	5.37	1.598	316.113
8:00:00 AM	5.376	1.584	314.997
8:15:00 AM	5.396	1.733	346.494
8:30:00 AM	5.591	1.575	325.837
8:45:00 AM	6.178	1.877	452.199
9:00:00 AM	6.609	1.816	462.613
9:15:00 AM	6.783	1.843	486.145
9:30:00 AM	6.448	1.667	425.71
9:45:00 AM	6.111	1.847	432.155
10:00:00 AM	6.353	1.719	418.779
10:15:00 AM	6.538	1.926	501.022
10:30:00 AM	6.618	1.777	458.552
10:45:00 AM	6.439	1.797	456.943
11:00:00 AM	6.457	1.814	463.895
11:15:00 AM	6.541	1.88	489.524
11:30:00 AM	7.56	2.017	619.656
11:45:00 AM	7.433	1.734	510.171

Friday - P.M. 8/4/2023

Time	Level	Velocity	Flow
12:00:00 PM	6.793	1.898	520.225
12:15:00 PM	6.605	1.81	477.442
12:30:00 PM	6.835	1.955	540.159
12:45:00 PM	6.961	1.954	547.113
1:00:00 PM	6.91	1.964	550.802
1:15:00 PM	7.305	1.767	519.321
1:30:00 PM	7.633	1.885	586.155
1:45:00 PM	7.699	1.897	614.249
2:00:00 PM	7.673	1.926	594.885
2:15:00 PM	7.295	1.95	587.974
2:30:00 PM	7.296	1.888	569.261
2:45:00 PM	7.343	1.943	582.449
3:00:00 PM	7.251	1.902	562.879
3:15:00 PM	7.305	1.823	539.676
3:30:00 PM	7.451	1.875	570.721
3:45:00 PM	8.376	1.952	705.995
4:00:00 PM	8.597	1.855	693.7
4:15:00 PM	8.047	1.904	643.836
4:30:00 PM	7.981	1.93	649.86
4:45:00 PM	7.852	1.98	643.597
5:00:00 PM	7.975	1.796	602.595
5:15:00 PM	7.883	1.915	639.799
5:30:00 PM	8.752	1.927	737.533
5:45:00 PM	8.833	1.871	724.522
6:00:00 PM	8.634	1.852	696.309
6:15:00 PM	8.112	2	693.694
6:30:00 PM	7.568	1.912	605.421
6:45:00 PM	7.407	1.976	607.8
7:00:00 PM	7.048	1.9	533.846
7:15:00 PM	7.241	1.902	556.014
7:30:00 PM	7.349	1.994	598.714
7:45:00 PM	7.145	2.006	560.574
8:00:00 PM	7.977	2.012	645.839
8:15:00 PM	7.62	1.909	551.842
8:30:00 PM	6.991	1.833	519.761
8:45:00 PM	7.086	2.09	605.682
9:00:00 PM	7.185	1.805	533.214
9:15:00 PM	7.378	1.933	589.209
9:30:00 PM	8.105	1.985	644.233
9:45:00 PM	8.308	1.915	685.183
10:00:00 PM	8.444	1.884	686.283
10:15:00 PM	8.383	1.916	642.873
10:30:00 PM	7.643	1.862	563.337
10:45:00 PM	7.261	2.031	588.503
11:00:00 PM	7.081	1.763	510.764
11:15:00 PM	7.03	1.724	494.592
11:30:00 PM	6.967	1.911	541.688
11:45:00 PM	6.661	1.74	464.335

	Inches	Feet/Sec	GPM
Daily Avg:	6.543	1.771	467.989
Daily Min:	4.062	1.251	160.136
Daily Max:	8.833	2.09	737.533
Peak to Avg:			1.58

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/5/2023, 12:00 a.m. - 12:00 p.m.**

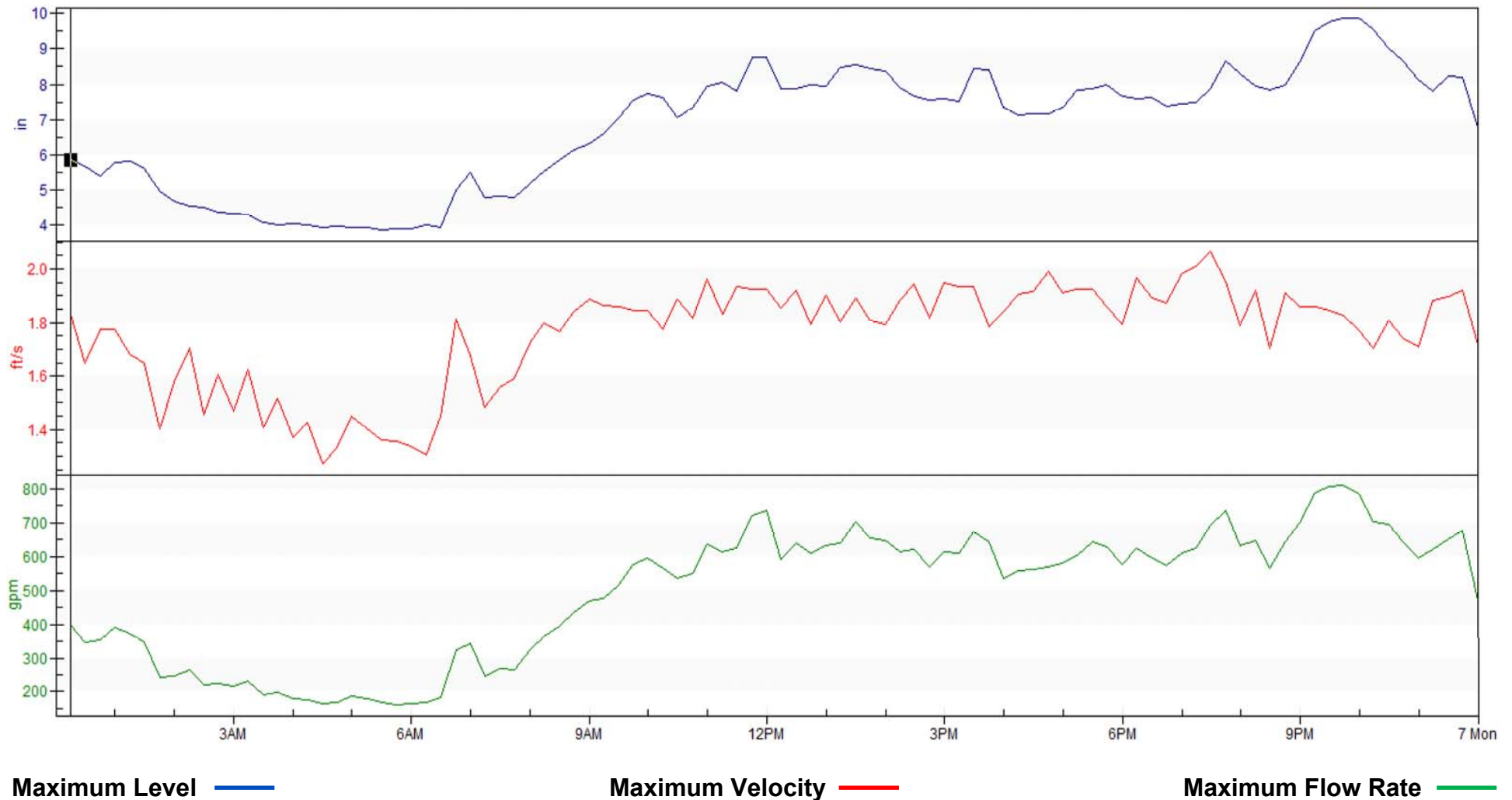
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Saturday - A.M. 8/5/2023

Saturday - P.M. 8/5/2023

Time	Level	Velocity	Flow		Time	Level	Velocity	Flow
12:00:00 AM	7.239	2.124	611.493		12:00:00 PM	8.099	1.916	657.395
12:15:00 AM	7.119	1.78	519.322		12:15:00 PM	8.039	1.848	622.954
12:30:00 AM	5.98	1.708	364.021		12:30:00 PM	7.845	1.839	605.253
12:45:00 AM	5.436	1.659	334.999		12:45:00 PM	8.48	1.863	672.673
1:00:00 AM	5.209	1.546	281.045		1:00:00 PM	9.019	1.846	714.093
1:15:00 AM	4.931	1.495	258.822		1:15:00 PM	9.009	1.791	704.078
1:30:00 AM	4.895	1.418	247.488		1:30:00 PM	9.012	1.84	719.758
1:45:00 AM	4.745	1.48	247.252		1:45:00 PM	8.704	1.783	664.174
2:00:00 AM	4.582	1.436	226.994		2:00:00 PM	8.228	1.889	660.119
2:15:00 AM	4.547	1.459	223.937		2:15:00 PM	7.831	1.81	599.528
2:30:00 AM	4.441	1.479	219.037		2:30:00 PM	7.89	1.801	602.403
2:45:00 AM	5.106	1.448	262.692		2:45:00 PM	8.203	1.967	665.089
3:00:00 AM	5.152	1.823	341.686		3:00:00 PM	8.909	1.888	706.783
3:15:00 AM	4.907	1.314	230.077		3:15:00 PM	8.822	1.867	711.312
3:30:00 AM	4.118	1.456	194.535		3:30:00 PM	8.142	1.768	608.434
3:45:00 AM	4.059	1.27	170.13		3:45:00 PM	7.886	1.855	617.771
4:00:00 AM	4.027	1.366	181.044		4:00:00 PM	7.794	1.847	591.225
4:15:00 AM	4.058	1.237	158.092		4:15:00 PM	7.676	1.96	630.116
4:30:00 AM	3.918	1.199	148.285		4:30:00 PM	8.147	1.88	634.844
4:45:00 AM	3.945	1.209	150.268		4:45:00 PM	8.336	1.837	655.024
5:00:00 AM	3.994	1.353	172.125		5:00:00 PM	8.311	1.854	656.958
5:15:00 AM	4.095	1.491	202.262		5:15:00 PM	8.112	1.817	624.964
5:30:00 AM	4.231	1.389	189.541		5:30:00 PM	7.459	1.845	572.955
5:45:00 AM	4.254	1.394	195.394		5:45:00 PM	7.478	1.952	605.742
6:00:00 AM	4.292	1.297	180.751		6:00:00 PM	7.402	1.927	590.429
6:15:00 AM	4.484	1.527	229.361		6:15:00 PM	7.514	1.95	601.15
6:30:00 AM	4.588	1.449	230.908		6:30:00 PM	8.375	1.953	687.811
6:45:00 AM	4.674	1.529	236.696		6:45:00 PM	8.437	1.823	665.439
7:00:00 AM	4.908	1.652	278.865		7:00:00 PM	7.52	1.834	558.008
7:15:00 AM	5.03	1.632	295.906		7:15:00 PM	7.209	1.896	559.094
7:30:00 AM	6.187	1.917	462.732		7:30:00 PM	7.222	1.988	591.247
7:45:00 AM	6.412	1.819	460.838		7:45:00 PM	7.164	1.887	555.292
8:00:00 AM	5.813	1.682	372.76		8:00:00 PM	7.32	1.849	557.915
8:15:00 AM	5.931	1.739	391.501		8:15:00 PM	7.486	1.888	575.535
8:30:00 AM	5.997	1.758	401.639		8:30:00 PM	7.732	1.795	584.508
8:45:00 AM	6.204	1.825	442.22		8:45:00 PM	7.694	1.96	634.261
9:00:00 AM	6.354	1.813	451.971		9:00:00 PM	7.702	1.925	623.62
9:15:00 AM	6.56	1.846	474.372		9:15:00 PM	7.362	1.879	551.36
9:30:00 AM	7.437	1.941	595.227		9:30:00 PM	7.29	2.001	602.783
9:45:00 AM	8.242	1.848	637.414		9:45:00 PM	7.316	1.965	594.675
10:00:00 AM	8.317	1.968	705.029		10:00:00 PM	7.247	1.84	543.437
10:15:00 AM	8.074	1.797	593.572		10:15:00 PM	7.11	1.71	493.657
10:30:00 AM	8.088	1.838	635.188		10:30:00 PM	7.034	1.95	559.945
10:45:00 AM	7.797	1.826	595.49		10:45:00 PM	8.004	2.002	662.021
11:00:00 AM	7.882	2.014	672.684		11:00:00 PM	7.883	1.804	570.732
11:15:00 AM	8.024	1.848	624.185		11:15:00 PM	6.907	1.762	493.883
11:30:00 AM	8.841	1.833	698.545		11:30:00 PM	6.693	1.881	505.17
11:45:00 AM	8.598	1.776	633.222		11:45:00 PM	6.521	1.829	474.143
					Inches Feet/Sec GPM			
					Daily Avg: 6.759 1.742 485.894			
					Daily Min: 3.918 1.199 148.285			
					Daily Max: 9.019 2.014 719.758			
					Peak to Avg: 1.48			

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/6/2023, 12:00 a.m. - 12:00 p.m.**

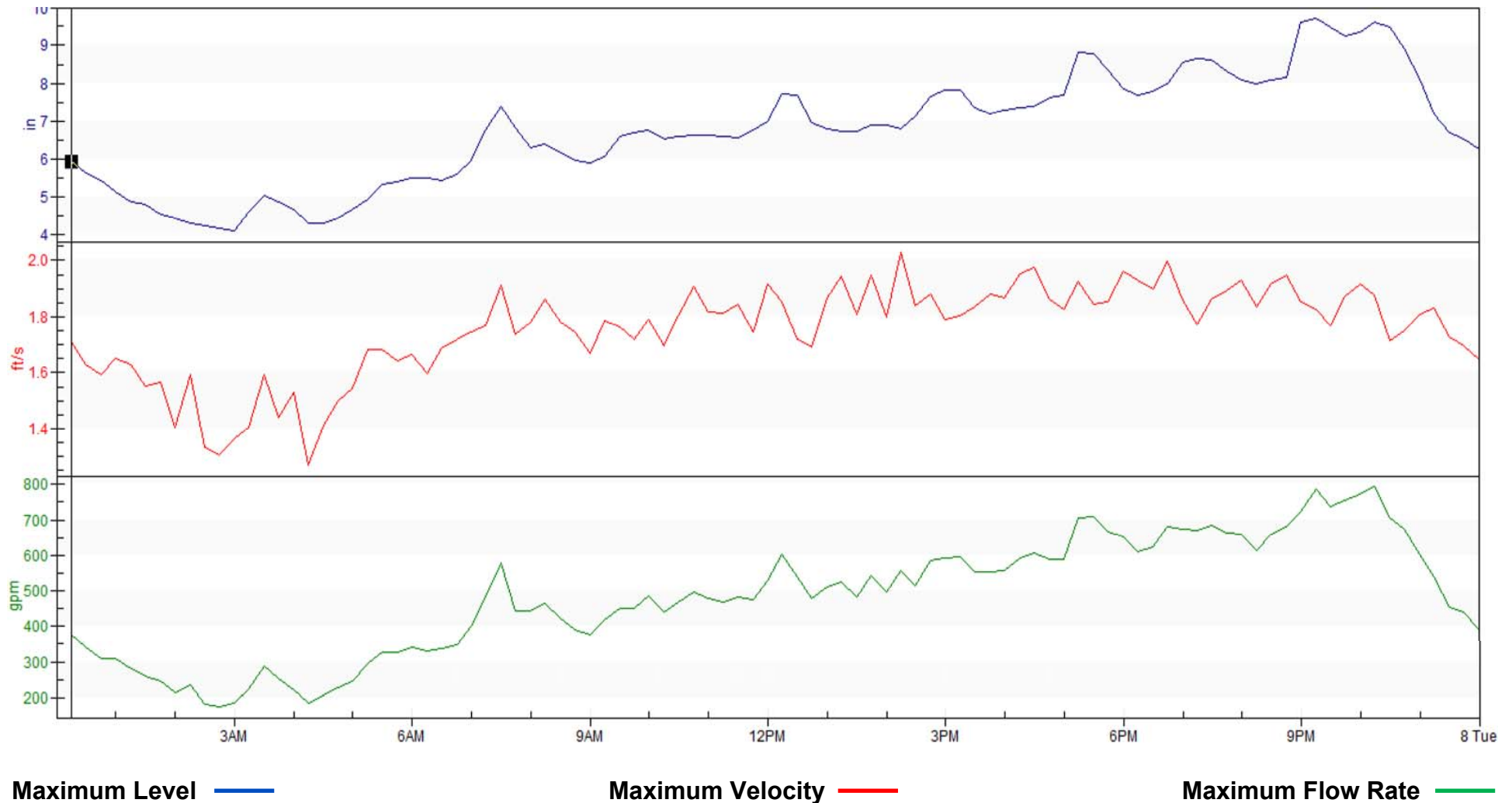
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Sunday - A.M. 8/6/2023

Sunday - P.M. 8/6/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	6.115	1.829	423.378	12:00:00 PM	8.759	1.926	737.937
12:15:00 AM	5.866	1.83	398.152	12:15:00 PM	7.881	1.854	592.398
12:30:00 AM	5.67	1.646	347.576	12:30:00 PM	7.884	1.918	640.833
12:45:00 AM	5.384	1.772	353.201	12:45:00 PM	7.996	1.794	610.63
1:00:00 AM	5.795	1.775	391.52	1:00:00 PM	7.944	1.9	633.599
1:15:00 AM	5.812	1.68	372.254	1:15:00 PM	8.472	1.802	639.587
1:30:00 AM	5.594	1.646	345.814	1:30:00 PM	8.552	1.894	702.963
1:45:00 AM	4.974	1.404	243.063	1:45:00 PM	8.451	1.808	655.958
2:00:00 AM	4.67	1.579	247.007	2:00:00 PM	8.363	1.791	646.362
2:15:00 AM	4.529	1.704	266.627	2:15:00 PM	7.918	1.883	613.429
2:30:00 AM	4.511	1.456	220.515	2:30:00 PM	7.658	1.942	621.516
2:45:00 AM	4.356	1.605	225.904	2:45:00 PM	7.573	1.817	570.605
3:00:00 AM	4.327	1.467	215.241	3:00:00 PM	7.585	1.95	615.64
3:15:00 AM	4.294	1.623	232.922	3:15:00 PM	7.531	1.936	608.801
3:30:00 AM	4.072	1.407	189.367	3:30:00 PM	8.431	1.934	675.092
3:45:00 AM	4.021	1.515	199.742	3:45:00 PM	8.417	1.783	644.127
4:00:00 AM	4.04	1.368	179.045	4:00:00 PM	7.364	1.839	535.86
4:15:00 AM	4.016	1.426	175.955	4:15:00 PM	7.135	1.905	557.584
4:30:00 AM	3.957	1.272	164.362	4:30:00 PM	7.155	1.916	562.836
4:45:00 AM	3.988	1.334	168.265	4:45:00 PM	7.158	1.988	568.278
5:00:00 AM	3.927	1.45	185.333	5:00:00 PM	7.348	1.912	580.304
5:15:00 AM	3.957	1.402	181.237	5:15:00 PM	7.844	1.923	601.963
5:30:00 AM	3.87	1.362	169.865	5:30:00 PM	7.89	1.923	643.169
5:45:00 AM	3.924	1.356	161.789	5:45:00 PM	7.979	1.858	630.749
6:00:00 AM	3.907	1.339	165.701	6:00:00 PM	7.653	1.793	575.955
6:15:00 AM	4.012	1.306	168.639	6:15:00 PM	7.579	1.966	623.487
6:30:00 AM	3.953	1.448	181.387	6:30:00 PM	7.615	1.892	596.437
6:45:00 AM	4.992	1.811	324.796	6:45:00 PM	7.39	1.874	571.88
7:00:00 AM	5.503	1.677	341.194	7:00:00 PM	7.44	1.981	612.087
7:15:00 AM	4.779	1.485	247.288	7:15:00 PM	7.475	2.007	625.12
7:30:00 AM	4.836	1.559	267.578	7:30:00 PM	7.892	2.066	691.136
7:45:00 AM	4.792	1.592	266.522	7:45:00 PM	8.675	1.952	738.389
8:00:00 AM	5.166	1.722	324.07	8:00:00 PM	8.289	1.79	631.471
8:15:00 AM	5.521	1.796	364.797	8:15:00 PM	7.947	1.919	648.018
8:30:00 AM	5.846	1.765	394.159	8:30:00 PM	7.85	1.702	565.49
8:45:00 AM	6.129	1.841	435.805	8:45:00 PM	7.985	1.909	642.838
9:00:00 AM	6.309	1.889	468.208	9:00:00 PM	8.637	1.861	700.148
9:15:00 AM	6.608	1.865	475.95	9:15:00 PM	9.499	1.86	789.759
9:30:00 AM	7.075	1.86	517.14	9:30:00 PM	9.773	1.844	808.704
9:45:00 AM	7.578	1.843	577.929	9:45:00 PM	9.848	1.827	810.073
10:00:00 AM	7.728	1.844	596.476	10:00:00 PM	9.867	1.77	784.169
10:15:00 AM	7.62	1.774	566.766	10:15:00 PM	9.539	1.706	704.632
10:30:00 AM	7.069	1.886	535.031	10:30:00 PM	9.005	1.807	694.767
10:45:00 AM	7.339	1.818	552.388	10:45:00 PM	8.643	1.74	642.225
11:00:00 AM	7.953	1.961	636.549	11:00:00 PM	8.144	1.708	595.518
11:15:00 AM	8.069	1.83	612.392	11:15:00 PM	7.806	1.882	620.756
11:30:00 AM	7.8	1.933	625.925	11:30:00 PM	8.226	1.897	652.811
11:45:00 AM	8.77	1.922	721.068	11:45:00 PM	8.197	1.921	675.493
				Inches	Feet/Sec	GPM	
Daily Avg:				6.791	1.755	493.622	
Daily Min:				3.87	1.272	161.789	
Daily Max:				9.867	2.066	810.073	
Peak to Avg:						1.64	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/7/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Monday - A.M. 8/7/2023

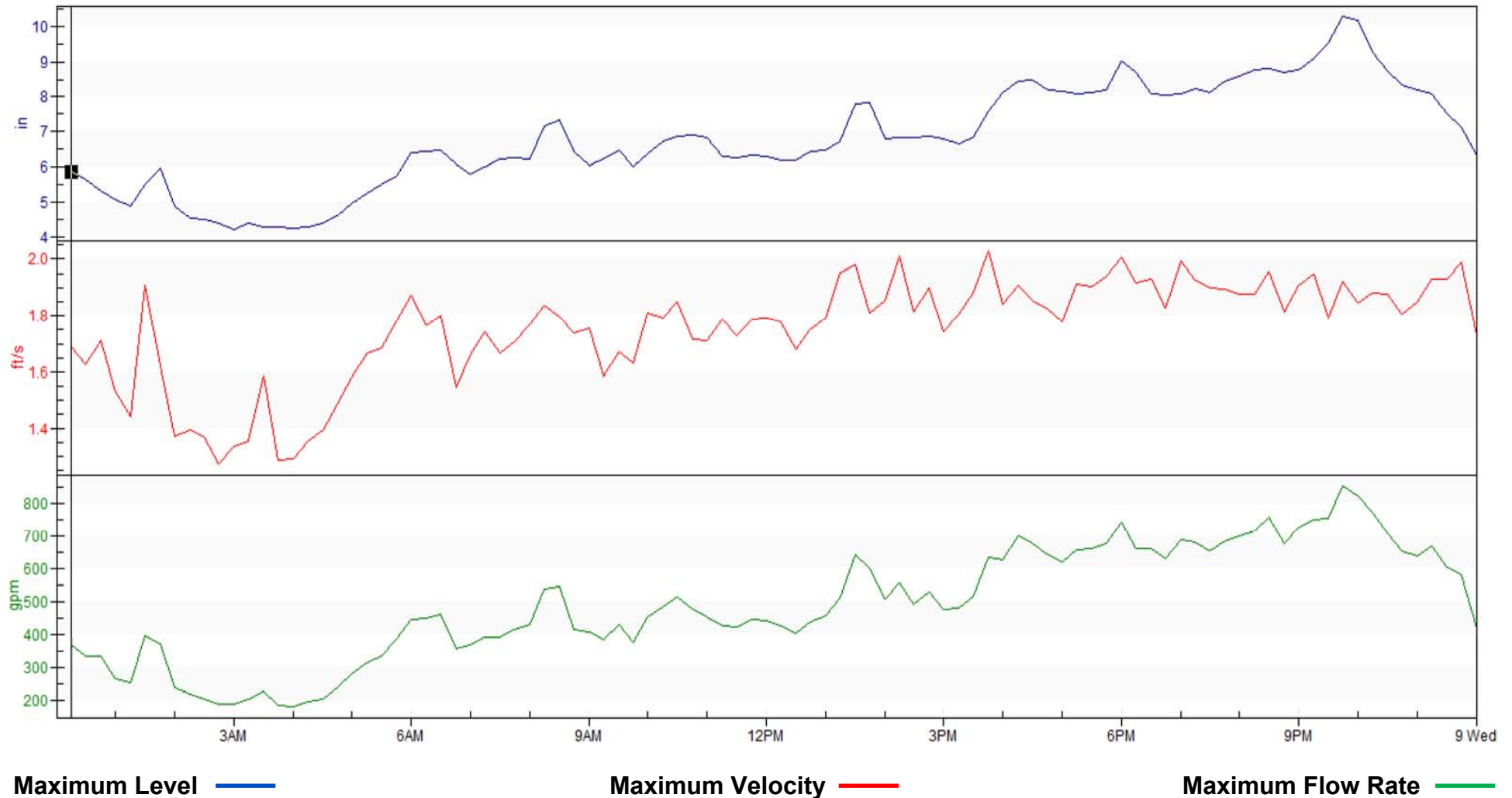
Time	Level	Velocity	Velocity
12:10:00 AM	6.781	1.72	470.218
12:15:00 AM	5.932	1.711	375.369
12:30:00 AM	5.623	1.63	341.489
12:45:00 AM	5.429	1.595	309.895
1:00:00 AM	5.154	1.653	309.965
1:15:00 AM	4.867	1.628	281.916
1:30:00 AM	4.822	1.552	261.201
1:45:00 AM	4.555	1.565	246.905
2:00:00 AM	4.443	1.406	212.585
2:15:00 AM	4.319	1.592	232.925
2:30:00 AM	4.242	1.333	182.504
2:45:00 AM	4.168	1.303	175.306
3:00:00 AM	4.113	1.364	186.187
3:15:00 AM	4.608	1.406	225.428
3:30:00 AM	5.027	1.593	288.624
3:45:00 AM	4.888	1.441	251.032
4:00:00 AM	4.677	1.53	221.71
4:15:00 AM	4.324	1.269	185.252
4:30:00 AM	4.305	1.415	205.692
4:45:00 AM	4.455	1.5	229.341
5:00:00 AM	4.684	1.546	244.996
5:15:00 AM	4.951	1.683	296.142
5:30:00 AM	5.334	1.684	326.685
5:45:00 AM	5.398	1.643	327.222
6:00:00 AM	5.494	1.663	340.766
6:15:00 AM	5.509	1.597	328.512
6:30:00 AM	5.43	1.686	337.833
6:45:00 AM	5.602	1.717	349.12
7:00:00 AM	5.967	1.746	400.993
7:15:00 AM	6.778	1.766	482.465
7:30:00 AM	7.403	1.912	577.089
7:45:00 AM	6.819	1.735	444.547
8:00:00 AM	6.311	1.784	442.063
8:15:00 AM	6.401	1.862	465.202
8:30:00 AM	6.174	1.783	421.355
8:45:00 AM	5.961	1.744	391.527
9:00:00 AM	5.901	1.668	375.061
9:15:00 AM	6.052	1.788	418.638
9:30:00 AM	6.612	1.764	451.733
9:45:00 AM	6.683	1.719	451.075
10:00:00 AM	6.75	1.79	484.667
10:15:00 AM	6.543	1.697	439.337
10:30:00 AM	6.588	1.804	468.23
10:45:00 AM	6.638	1.907	497.753
11:00:00 AM	6.616	1.818	480.652
11:15:00 AM	6.584	1.814	469.045
11:30:00 AM	6.574	1.846	483.366
11:45:00 AM	6.777	1.746	476.123

Monday - P.M. 8/7/2023

Time	Level	Velocity	Flow
12:00:00 PM	7.002	1.918	527.529
12:15:00 PM	7.722	1.855	603.261
12:30:00 PM	7.706	1.719	538.909
12:45:00 PM	6.946	1.693	478.155
1:00:00 PM	6.798	1.867	511.427
1:15:00 PM	6.723	1.942	524.789
1:30:00 PM	6.729	1.807	481.474
1:45:00 PM	6.891	1.948	544.165
2:00:00 PM	6.893	1.799	497.808
2:15:00 PM	6.799	2.029	555.347
2:30:00 PM	7.134	1.842	512.942
2:45:00 PM	7.651	1.881	584.23
3:00:00 PM	7.826	1.792	592.193
3:15:00 PM	7.812	1.803	595.252
3:30:00 PM	7.351	1.834	551.649
3:45:00 PM	7.205	1.878	555.097
4:00:00 PM	7.291	1.867	557.911
4:15:00 PM	7.345	1.951	590.925
4:30:00 PM	7.393	1.973	605.616
4:45:00 PM	7.611	1.864	587.945
5:00:00 PM	7.68	1.828	590.127
5:15:00 PM	8.811	1.924	706.545
5:30:00 PM	8.797	1.842	709.704
5:45:00 PM	8.345	1.854	666.979
6:00:00 PM	7.847	1.96	650.885
6:15:00 PM	7.692	1.93	608.291
6:30:00 PM	7.8	1.9	625.765
6:45:00 PM	8.002	1.998	680.827
7:00:00 PM	8.545	1.859	674.975
7:15:00 PM	8.663	1.772	669.374
7:30:00 PM	8.618	1.863	685.309
7:45:00 PM	8.329	1.893	663.11
8:00:00 PM	8.072	1.93	660.296
8:15:00 PM	7.984	1.833	615.068
8:30:00 PM	8.1	1.914	658.918
8:45:00 PM	8.165	1.95	682.036
9:00:00 PM	9.602	1.855	722.449
9:15:00 PM	9.711	1.827	786.121
9:30:00 PM	9.489	1.769	738.176
9:45:00 PM	9.259	1.87	756.159
10:00:00 PM	9.329	1.918	773.084
10:15:00 PM	9.622	1.878	793.272
10:30:00 PM	9.474	1.714	705.007
10:45:00 PM	8.915	1.751	675.311
11:00:00 PM	8.135	1.81	601.853
11:15:00 PM	7.195	1.83	538.853
11:30:00 PM	6.692	1.729	455.946
11:45:00 PM	6.53	1.697	440.945

	Inches	Feet/Sec	GPM
Daily Avg:	6.765	1.753	483.448
Daily Min:	4.113	1.269	175.306
Daily Max:	9.711	2.029	793.272
Peak to Avg:			1.64

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/8/2023, 12:00 a.m. - 12:00 p.m.**

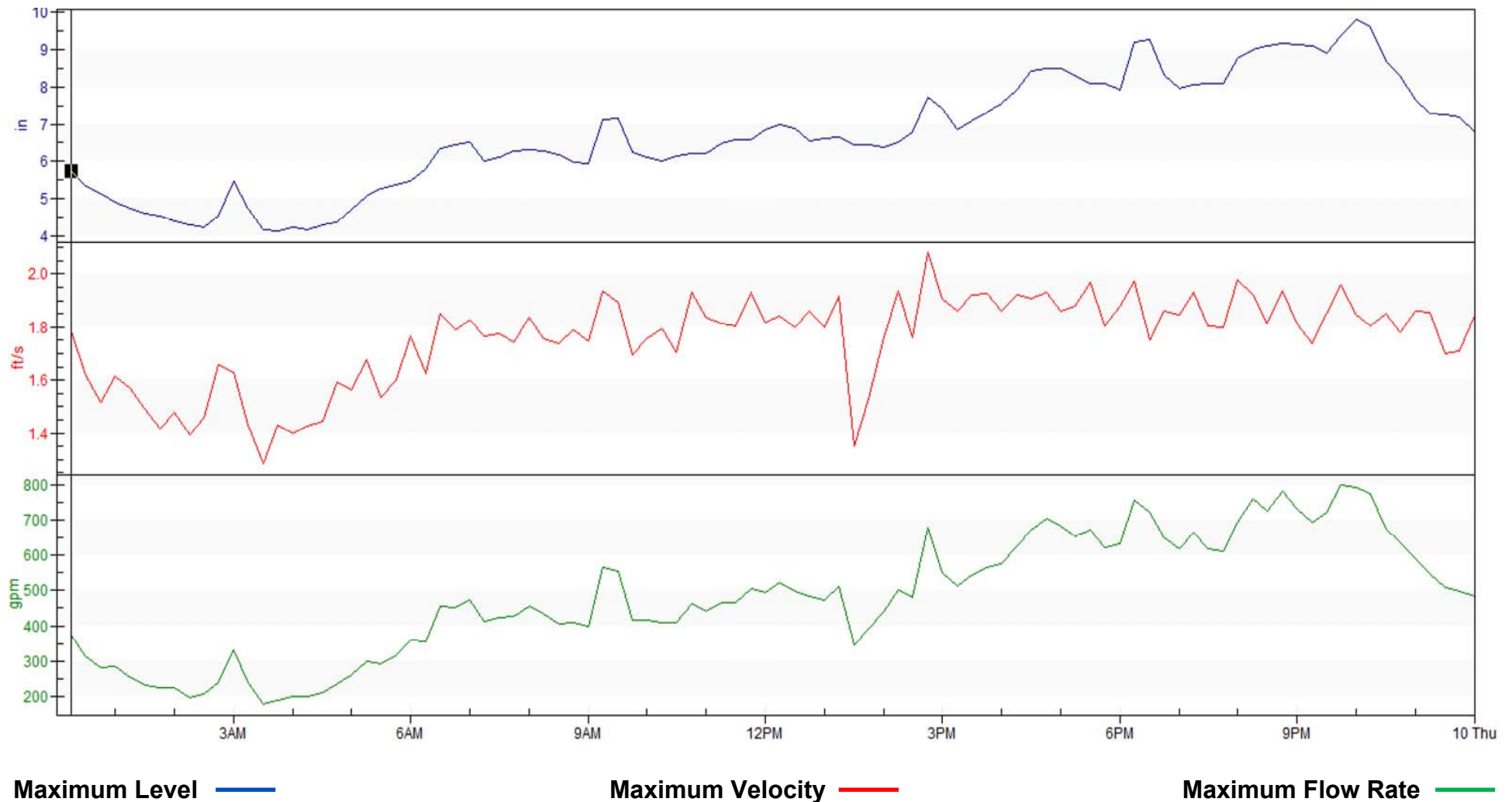
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Tuesday - A.M. 8/8/2023

Tuesday - P.M. 8/8/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	6.273	1.648	389.013	12:00:00 PM	6.279	1.793	441.679
12:15:00 AM	5.871	1.691	366.53	12:15:00 PM	6.179	1.777	425.47
12:30:00 AM	5.646	1.626	335.14	12:30:00 PM	6.186	1.679	402.22
12:45:00 AM	5.307	1.711	334.231	12:45:00 PM	6.435	1.75	435.601
1:00:00 AM	5.06	1.534	263.493	1:00:00 PM	6.455	1.791	457.892
1:15:00 AM	4.897	1.441	251.678	1:15:00 PM	6.714	1.954	510.801
1:30:00 AM	5.512	1.908	392.914	1:30:00 PM	7.784	1.981	642.022
1:45:00 AM	5.972	1.623	373.297	1:45:00 PM	7.828	1.808	598.397
2:00:00 AM	4.873	1.371	237.722	2:00:00 PM	6.773	1.853	505.743
2:15:00 AM	4.511	1.395	217.073	2:15:00 PM	6.83	2.012	555.41
2:30:00 AM	4.498	1.365	202.569	2:30:00 PM	6.818	1.815	489.481
2:45:00 AM	4.361	1.273	188.759	2:45:00 PM	6.873	1.898	528.279
3:00:00 AM	4.197	1.333	187.33	3:00:00 PM	6.773	1.742	475.576
3:15:00 AM	4.375	1.354	201.839	3:15:00 PM	6.645	1.804	479.918
3:30:00 AM	4.256	1.585	227.153	3:30:00 PM	6.815	1.883	513.622
3:45:00 AM	4.264	1.288	181.987	3:45:00 PM	7.594	2.029	631.806
4:00:00 AM	4.235	1.292	180.128	4:00:00 PM	8.117	1.841	624.113
4:15:00 AM	4.27	1.353	194.78	4:15:00 PM	8.462	1.908	699.226
4:30:00 AM	4.384	1.393	204.146	4:30:00 PM	8.486	1.856	675.772
4:45:00 AM	4.599	1.488	237.953	4:45:00 PM	8.188	1.825	640.782
5:00:00 AM	4.954	1.582	280.514	5:00:00 PM	8.176	1.78	616.927
5:15:00 AM	5.243	1.666	315.641	5:15:00 PM	8.092	1.912	657.24
5:30:00 AM	5.486	1.684	331.548	5:30:00 PM	8.131	1.906	660.018
5:45:00 AM	5.748	1.784	387.089	5:45:00 PM	8.191	1.941	676.098
6:00:00 AM	6.396	1.871	443.864	6:00:00 PM	9.01	2.007	739.779
6:15:00 AM	6.417	1.766	447.936	6:15:00 PM	8.709	1.919	660.702
6:30:00 AM	6.459	1.802	460.22	6:30:00 PM	8.101	1.928	659.95
6:45:00 AM	6.087	1.545	357.347	6:45:00 PM	8.066	1.826	628.117
7:00:00 AM	5.799	1.662	367.181	7:00:00 PM	8.08	1.995	687.917
7:15:00 AM	5.999	1.743	392.344	7:15:00 PM	8.231	1.924	680.045
7:30:00 AM	6.199	1.666	391.78	7:30:00 PM	8.113	1.901	652.492
7:45:00 AM	6.243	1.707	415.598	7:45:00 PM	8.447	1.893	682.388
8:00:00 AM	6.222	1.771	429.904	8:00:00 PM	8.592	1.876	699.002
8:15:00 AM	7.149	1.836	538.483	8:15:00 PM	8.763	1.879	713.597
8:30:00 AM	7.345	1.796	546.556	8:30:00 PM	8.824	1.955	755.993
8:45:00 AM	6.429	1.74	412.715	8:45:00 PM	8.688	1.816	676.474
9:00:00 AM	6.025	1.757	404.922	9:00:00 PM	8.779	1.907	724.752
9:15:00 AM	6.22	1.584	385.084	9:15:00 PM	9.084	1.947	750.278
9:30:00 AM	6.484	1.673	430.345	9:30:00 PM	9.534	1.791	752.159
9:45:00 AM	6.002	1.63	375.822	9:45:00 PM	10.285	1.922	852.068
10:00:00 AM	6.369	1.809	454.197	10:00:00 PM	10.164	1.845	821.381
10:15:00 AM	6.715	1.793	483.84	10:15:00 PM	9.268	1.88	773.716
10:30:00 AM	6.863	1.851	513.957	10:30:00 PM	8.743	1.875	707.917
10:45:00 AM	6.898	1.715	477.282	10:45:00 PM	8.354	1.807	651.246
11:00:00 AM	6.813	1.709	452.943	11:00:00 PM	8.18	1.849	638.305
11:15:00 AM	6.272	1.788	425.181	11:15:00 PM	8.101	1.93	668.09
11:30:00 AM	6.243	1.729	422.068	11:30:00 PM	7.5	1.93	603.825
11:45:00 AM	6.332	1.789	445.658	11:45:00 PM	7.098	1.989	578.115
				Inches	Feet/Sec	GPM	
Daily Avg:				6.821	1.754	491.275	
Daily Min:				4.197	1.273	180.128	
Daily Max:				10.285	2.029	852.068	
Peak to Avg:						1.73	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7037**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/9/2023, 12:00 a.m. - 12:00 p.m.**

Sewer Line Flow Study Summary

Project: City of McFarland, Sewer Flow Study

Location: MH-7037

Pipe Size: 18" VCP

Time Period: 7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.

Level - Inches

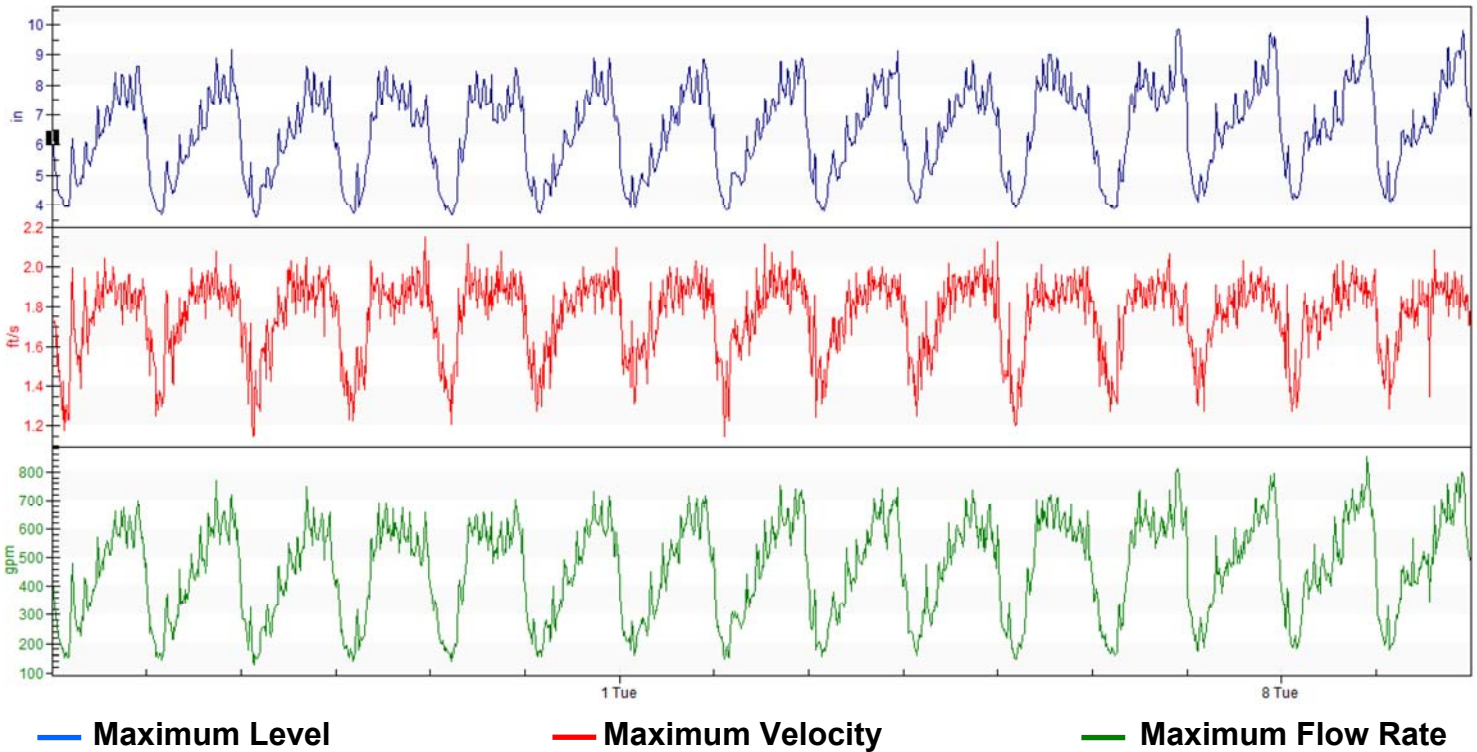
Average:	.....	6.364
Maximum:	.....	10.285
Minimum:	.....	3.429
Max d/D:	.....	57.1%

Velocity - Feet per Second

Average:	.....	1.669
Maximum:	.....	2.147
Minimum:	.....	0.939

Flow Rate - Gallons Per Minute

Average:	.....	434.830
Maximum:	.....	852.068
Minimum:	.....	105.747
Peak to Average	.....	1.78



Sewer Line Daily Totals

Project: City of McFarland, Sewer Flow Study

Location: MH-7037

Pipe Size: 18" VCP

Time Period: 7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.

Daily Totals - US Gallons

Date:	Gallons:
7/26/2023	598,305
7/27/2023	589,031
7/28/2023	572,224
7/29/2023	614,090
7/30/2023	626,340
7/31/2023	593,162
8/0/2023	603,945
8/2/2023	616,764
8/3/2023	614,178
8/4/2023	636,557
8/5/2023	665,005
8/6/2023	674,108
8/7/2023	662,074
8/8/2023	671,766
8/9/2023	654,813
Total Recorded Flow (15 Days)	9,392,330

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7037

Tuesday - A.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 AM	6.306	1.728	419.022
12:15:00 AM	5.75	1.786	373.888
12:30:00 AM	5.347	1.62	311.417
12:45:00 AM	5.137	1.514	281.026
1:00:00 AM	4.91	1.614	282.812
1:15:00 AM	4.719	1.567	251.763
1:30:00 AM	4.591	1.495	229.811
1:45:00 AM	4.546	1.416	222.734
2:00:00 AM	4.406	1.481	222.845
2:15:00 AM	4.288	1.393	194.951
2:30:00 AM	4.225	1.461	207.255
2:45:00 AM	4.538	1.656	239.231
3:00:00 AM	5.464	1.631	331.696
3:15:00 AM	4.743	1.432	239.016
3:30:00 AM	4.156	1.285	178.056
3:45:00 AM	4.128	1.431	186.928
4:00:00 AM	4.234	1.398	198.913
4:15:00 AM	4.17	1.427	197.431
4:30:00 AM	4.304	1.447	210.725
4:45:00 AM	4.362	1.594	235.873
5:00:00 AM	4.711	1.561	258.214
5:15:00 AM	5.079	1.675	299.589
5:30:00 AM	5.258	1.533	291.133
5:45:00 AM	5.385	1.602	317.061
6:00:00 AM	5.477	1.767	360.529
6:15:00 AM	5.812	1.626	355.371
6:30:00 AM	6.356	1.851	455.836
6:45:00 AM	6.441	1.788	451.828
7:00:00 AM	6.504	1.828	472.27
7:15:00 AM	6.025	1.767	411.29
7:30:00 AM	6.112	1.775	421.457
7:45:00 AM	6.264	1.744	427.97
8:00:00 AM	6.318	1.838	456.442
8:15:00 AM	6.282	1.757	433.081
8:30:00 AM	6.186	1.738	406.084
8:45:00 AM	5.966	1.79	408.325
9:00:00 AM	5.951	1.746	399.552
9:15:00 AM	7.123	1.937	565.623
9:30:00 AM	7.145	1.894	555.37
9:45:00 AM	6.256	1.694	415.137
10:00:00 AM	6.117	1.758	416.986
10:15:00 AM	6.02	1.792	409.484
10:30:00 AM	6.157	1.707	409.154
10:45:00 AM	6.208	1.934	462.946
11:00:00 AM	6.196	1.837	442.269
11:15:00 AM	6.479	1.815	466.59
11:30:00 AM	6.596	1.804	467.307
11:45:00 AM	6.571	1.93	505.614

Tuesday - P.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 PM	6.866	1.82	496.103
12:15:00 PM	6.968	1.841	521.984
12:30:00 PM	6.894	1.799	497.096
12:45:00 PM	6.555	1.862	482.507
1:00:00 PM	6.607	1.8	474.426
1:15:00 PM	6.661	1.919	512.054
1:30:00 PM	6.46	1.35	345.548
1:45:00 PM	6.448	1.529	390.256
2:00:00 PM	6.382	1.763	441.423
2:15:00 PM	6.507	1.937	500.799
2:30:00 PM	6.768	1.76	479.867
2:45:00 PM	7.739	2.083	679.031
3:00:00 PM	7.418	1.907	550.716
3:15:00 PM	6.841	1.86	513.326
3:30:00 PM	7.101	1.924	544.72
3:45:00 PM	7.334	1.925	566.688
4:00:00 PM	7.556	1.863	577.505
4:15:00 PM	7.925	1.921	626.03
4:30:00 PM	8.431	1.906	673.03
4:45:00 PM	8.489	1.93	704.391
5:00:00 PM	8.487	1.862	683.211
5:15:00 PM	8.31	1.879	655.537
5:30:00 PM	8.078	1.968	672.081
5:45:00 PM	8.077	1.802	621.5
6:00:00 PM	7.931	1.882	633.683
6:15:00 PM	9.216	1.972	759.358
6:30:00 PM	9.27	1.753	721.668
6:45:00 PM	8.341	1.861	649.877
7:00:00 PM	7.973	1.847	618.859
7:15:00 PM	8.06	1.933	664.775
7:30:00 PM	8.091	1.802	617.787
7:45:00 PM	8.107	1.798	612.36
8:00:00 PM	8.777	1.977	695.832
8:15:00 PM	9.01	1.922	763.207
8:30:00 PM	9.09	1.812	727.57
8:45:00 PM	9.155	1.936	782.923
9:00:00 PM	9.118	1.814	731.517
9:15:00 PM	9.113	1.737	695.489
9:30:00 PM	8.915	1.853	723.609
9:45:00 PM	9.374	1.959	800.207
10:00:00 PM	9.807	1.849	794.312
10:15:00 PM	9.613	1.803	777.106
10:30:00 PM	8.698	1.852	675.459
10:45:00 PM	8.296	1.779	635.474
11:00:00 PM	7.666	1.862	590.783
11:15:00 PM	7.28	1.857	547.089
11:30:00 PM	7.261	1.702	509.892
11:45:00 PM	7.18	1.712	496.862

	Inches	Feet/Sec	GPM
Daily Avg:	6.729	1.754	481.836
Daily Min:	4.128	1.285	178.056
Daily Max:	9.807	2.083	800.207
Peak to Avg:			1.66

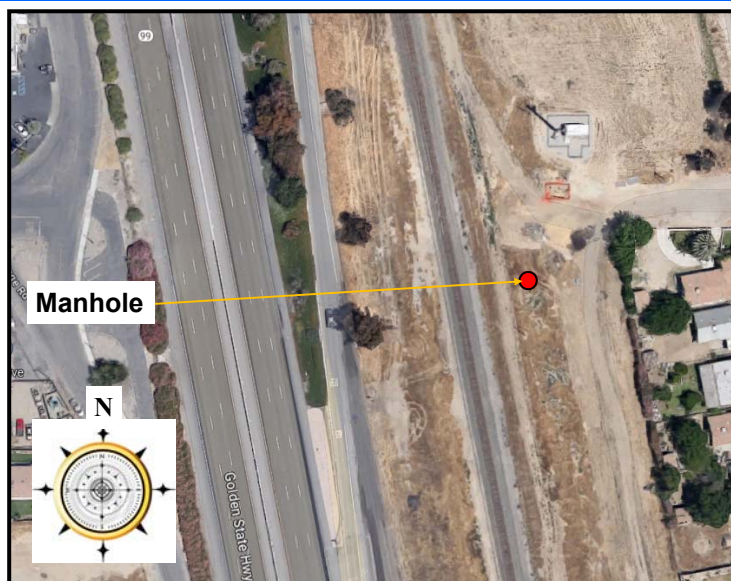
CITY OF MCFARLAND - SEWER FLOW STUDY

MH Location: **MH-7054, Behind Home @
480 Industrial St.
McFarland, CA 93250**

Pipe Size: **12" VCP**

Time Period: **7/26/2023 - 12:00 a.m. to
8/9/2023 - 12:00 a.m.**

GPS: **35.681454, -119.227245**



Manhole - Layout



- Manhole is constructed of stacked clay brick with a concrete trough through the base with VCP influent and effluent lines.

Equipment

Teledyne Isco 2150 Area Velocity Flow Meter with 10' measuring range:

Level Measurement:

- Method - Submerged pressure transducer mounted in the flow stream
- Transducer Type - Differential linear integrated circuit pressure transducer
- Range (standard) 0.033 to 10 ft (0.010 to 3.05 m); Maximum Allowable Level 34 ft (10.5 m)
- Accuracy ± 0.01 ft from 0.033 to 10 ft, (± 0.003 m from 0.01 to 3.05 m,)
- Long-Term Stability ± 0.023 ft/yr (± 0.007 m/yr)
- Compensated Range 32° to 122°F (0° to 50°C)

Velocity Measurement:

- Method - Doppler ultrasonic, frequency 500 kHz
- Typical Minimum Depth 0.08 ft (25 mm)
- Range -5 to +20 ft/s (-1.5 to +6.1 m/s)
- Accuracy (in water with uniform velocity profile, speed of sound = 4850 ft/s, for indicated velocity range) ± 0.1 ft/s from -5 to 5 ft/s (± 0.03 m/s from— 1.5 to +1.5 m/s)
- $\pm 2\%$ of reading from 5 to 20 ft/s (1.5 to 6.1 m/s)

Method Of Insertion:

- 12 inch line uses a SLIT ring with the transducer attached. (Street Level Installation Tool)



Gold Coast Environmental

Specializing in process instrumentation and calibration.

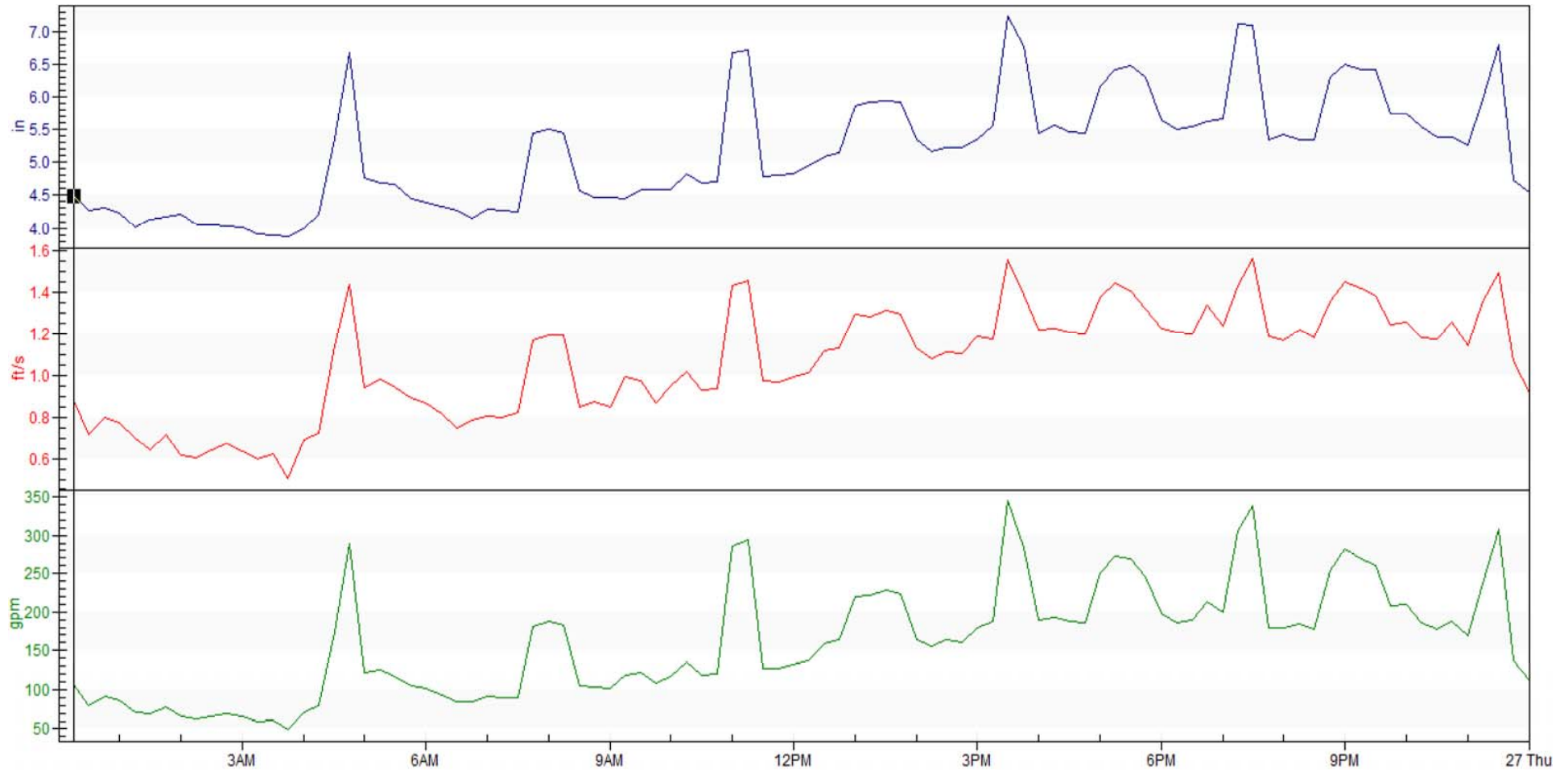


1868 Palma Drive, Suite I, Ventura, CA 93003

www.goldcoastenv.com

805.498.3811 ph.

MAXIMUM DAILY FLOW DATA



Maximum Level —

Maximum Velocity —

Maximum Flow Rate —

Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/26/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Wednesday - A.M. 7/26/2023

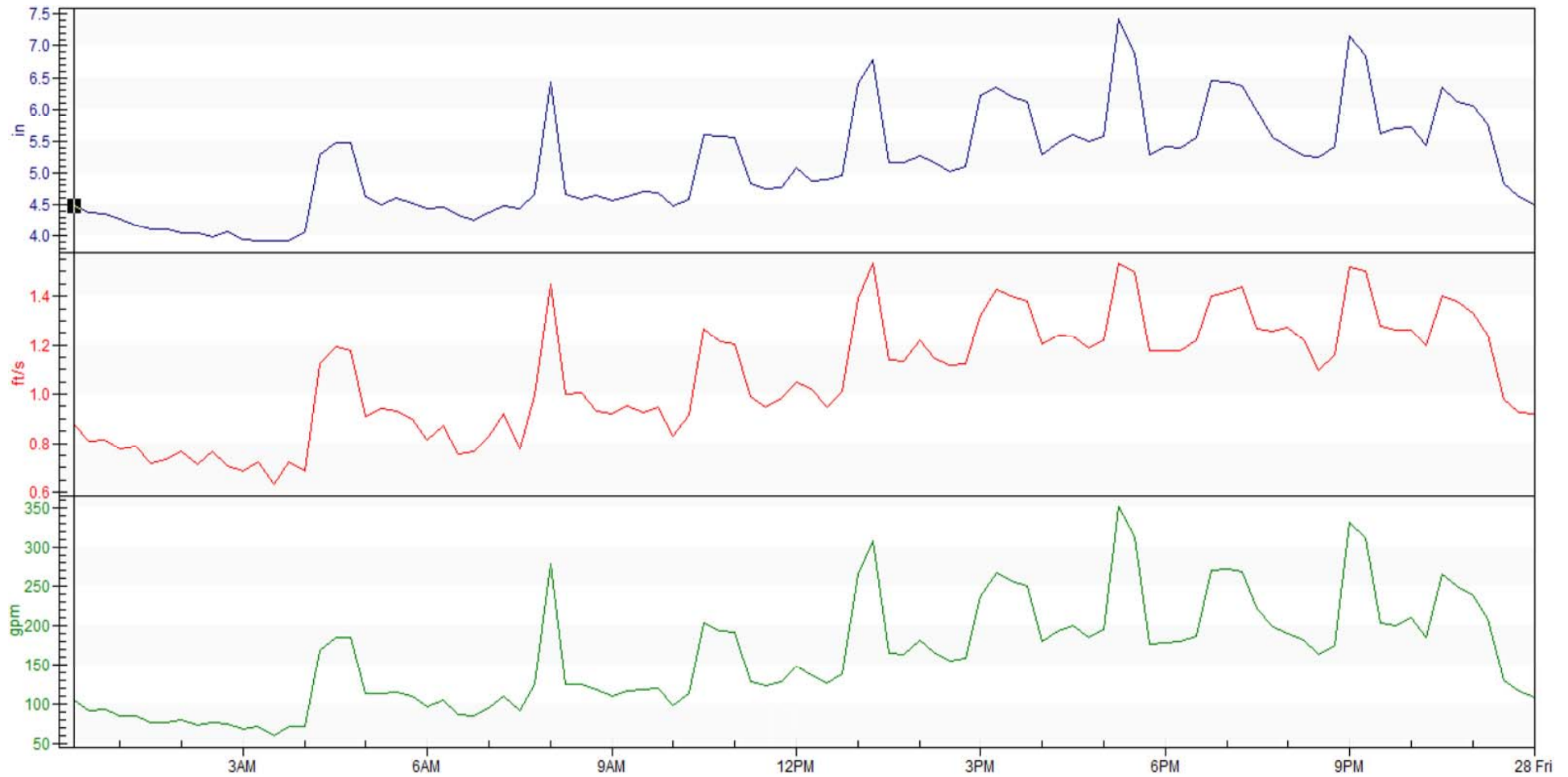
Time	Level	Velocity	Flow
12:15:00 AM	4.486	0.881	105.886
12:30:00 AM	4.263	0.717	80.023
12:45:00 AM	4.316	0.797	90.945
1:00:00 AM	4.222	0.773	85.587
1:15:00 AM	4.002	0.7	71.672
1:30:00 AM	4.125	0.642	68.905
1:45:00 AM	4.169	0.716	77.435
2:00:00 AM	4.201	0.615	66.736
2:15:00 AM	4.059	0.601	63.091
2:30:00 AM	4.06	0.638	65.927
2:45:00 AM	4.033	0.673	69.501
3:00:00 AM	4.016	0.635	65.592
3:15:00 AM	3.911	0.598	59.311
3:30:00 AM	3.9	0.622	61.261
3:45:00 AM	3.871	0.504	49.502
4:00:00 AM	3.981	0.691	70.584
4:15:00 AM	4.2	0.725	79.766
4:30:00 AM	5.36	1.141	173.913
4:45:00 AM	6.677	1.437	289.544
5:00:00 AM	4.762	0.94	122.439
5:15:00 AM	4.694	0.976	124.709
5:30:00 AM	4.666	0.939	116.462
5:45:00 AM	4.445	0.891	105.701
6:00:00 AM	4.385	0.865	100.743
6:15:00 AM	4.331	0.816	93.536
6:30:00 AM	4.265	0.747	83.851
6:45:00 AM	4.152	0.785	84.999
7:00:00 AM	4.295	0.806	91.357
7:15:00 AM	4.279	0.798	88.899
7:30:00 AM	4.249	0.822	89.769
7:45:00 AM	5.445	1.169	181.759
8:00:00 AM	5.496	1.193	186.896
8:15:00 AM	5.445	1.189	183.432
8:30:00 AM	4.569	0.845	104.153
8:45:00 AM	4.474	0.873	102.489
9:00:00 AM	4.463	0.847	101.08
9:15:00 AM	4.452	0.993	118.239
9:30:00 AM	4.595	0.975	121.125
9:45:00 AM	4.595	0.866	107.441
10:00:00 AM	4.582	0.948	117.334
10:15:00 AM	4.831	1.018	135.177
10:30:00 AM	4.69	0.928	117.713
10:45:00 AM	4.716	0.933	119.931
11:00:00 AM	6.675	1.429	286.327
11:15:00 AM	6.717	1.452	294.77
11:30:00 AM	4.786	0.972	127.515
11:45:00 AM	4.802	0.968	127.575

Wednesday - P.M. 7/26/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.823	0.993	131.523
12:15:00 PM	4.942	1.008	137.345
12:30:00 PM	5.086	1.113	158.285
12:45:00 PM	5.149	1.13	163.405
1:00:00 PM	5.852	1.291	220.41
1:15:00 PM	5.913	1.276	220.738
1:30:00 PM	5.934	1.312	227.98
1:45:00 PM	5.917	1.292	223.684
2:00:00 PM	5.344	1.127	163.362
2:15:00 PM	5.156	1.08	156.036
2:30:00 PM	5.234	1.108	163.55
2:45:00 PM	5.23	1.101	161.07
3:00:00 PM	5.345	1.185	179.819
3:15:00 PM	5.57	1.171	187.531
3:30:00 PM	7.235	1.551	344.557
3:45:00 PM	6.785	1.382	284.138
4:00:00 PM	5.45	1.219	189.825
4:15:00 PM	5.564	1.22	193.567
4:30:00 PM	5.468	1.203	188.116
4:45:00 PM	5.451	1.196	186.224
5:00:00 PM	6.155	1.375	250.333
5:15:00 PM	6.416	1.439	272.41
5:30:00 PM	6.469	1.405	268.41
5:45:00 PM	6.303	1.319	245.081
6:00:00 PM	5.635	1.221	198.54
6:15:00 PM	5.499	1.206	186.646
6:30:00 PM	5.549	1.195	190.028
6:45:00 PM	5.619	1.336	212.566
7:00:00 PM	5.66	1.236	199.78
7:15:00 PM	7.115	1.43	306.655
7:30:00 PM	7.1	1.56	338.744
7:45:00 PM	5.336	1.187	179.838
8:00:00 PM	5.42	1.165	180.021
8:15:00 PM	5.351	1.215	184.644
8:30:00 PM	5.346	1.175	178.227
8:45:00 PM	6.294	1.354	253.6
9:00:00 PM	6.495	1.447	281.733
9:15:00 PM	6.426	1.418	268.341
9:30:00 PM	6.422	1.382	260.483
9:45:00 PM	5.746	1.242	207.177
10:00:00 PM	5.749	1.256	209.515
10:15:00 PM	5.546	1.181	185.312
10:30:00 PM	5.389	1.17	178.38
10:45:00 PM	5.39	1.251	187.75
11:00:00 PM	5.259	1.142	169.762
11:15:00 PM	5.965	1.354	236.856
11:30:00 PM	6.799	1.494	307.756
11:45:00 PM	4.733	1.065	137.619

	Inches	Feet/Sec	GPM
Daily Avg:	5.183	1.066	163.031
Daily Min:	3.871	0.504	49.502
Daily Max:	7.235	1.56	344.557
Peak to Avg:			2.11

MAXIMUM DAILY FLOW DATA



Maximum Level —

Maximum Velocity —

Maximum Flow Rate —

Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/27/2023, 12:00 a.m. - 12:00 p.m.**

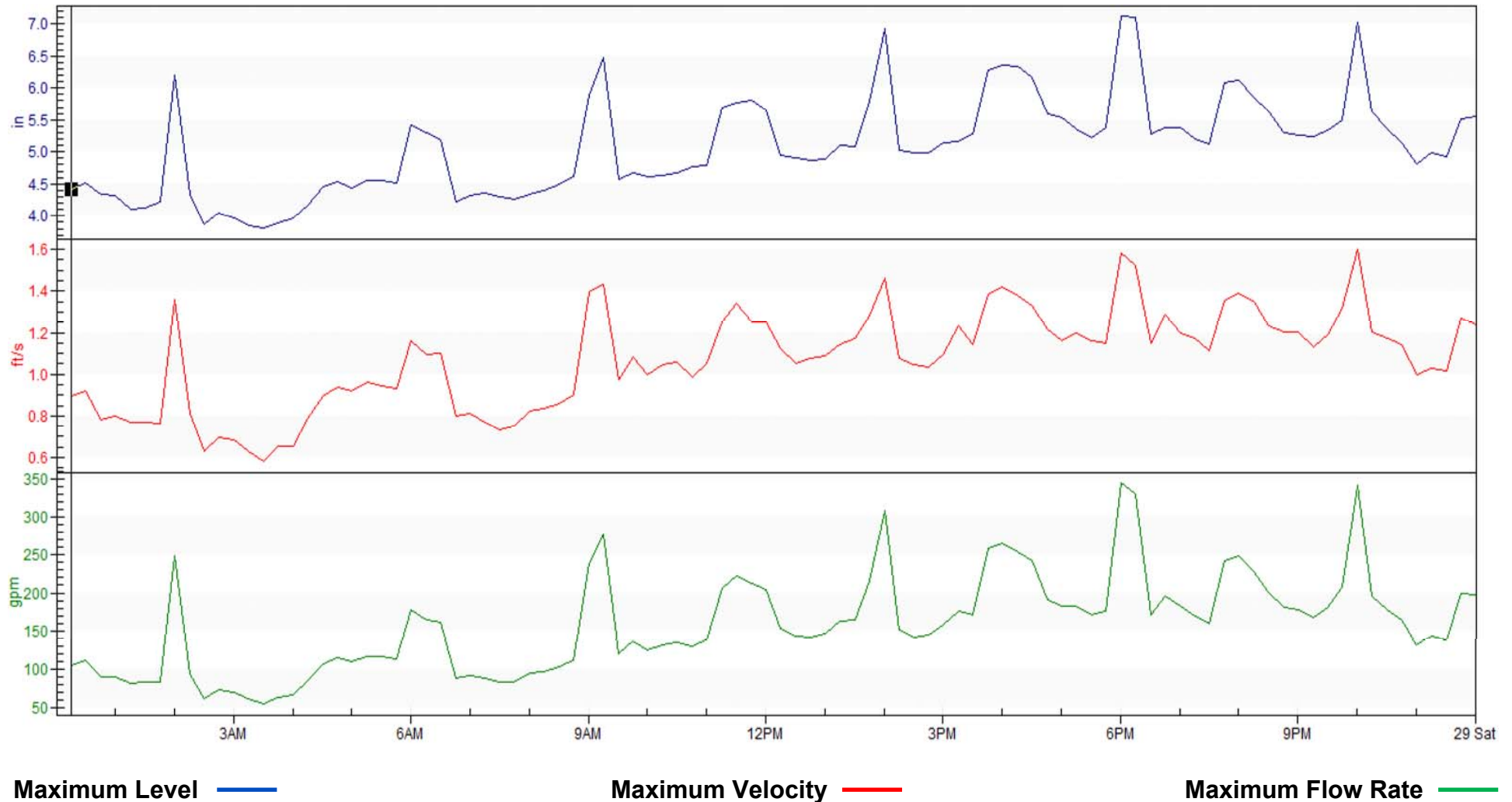
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Thursday - A.M. 7/27/2023

Thursday - P.M. 7/27/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	4.544	0.915	111.921	12:00:00 PM	5.075	1.049	148.085
12:15:00 AM	4.478	0.879	105.468	12:15:00 PM	4.875	1.02	137.09
12:30:00 AM	4.373	0.811	92.463	12:30:00 PM	4.894	0.947	127.248
12:45:00 AM	4.36	0.816	93.745	12:45:00 PM	4.946	1.014	138.107
1:00:00 AM	4.263	0.775	84.586	1:00:00 PM	6.399	1.389	265.574
1:15:00 AM	4.175	0.788	85.829	1:15:00 PM	6.788	1.533	308.507
1:30:00 AM	4.097	0.716	76.1	1:30:00 PM	5.155	1.139	164.911
1:45:00 AM	4.107	0.736	75.98	1:45:00 PM	5.164	1.132	163.951
2:00:00 AM	4.035	0.768	79.943	2:00:00 PM	5.265	1.217	181.119
2:15:00 AM	4.045	0.713	74.15	2:15:00 PM	5.158	1.144	165.792
2:30:00 AM	3.989	0.767	77.457	2:30:00 PM	5.01	1.119	155.955
2:45:00 AM	4.055	0.709	74.272	2:45:00 PM	5.101	1.123	158.15
3:00:00 AM	3.939	0.687	69.187	3:00:00 PM	6.227	1.32	237.339
3:15:00 AM	3.917	0.721	72.094	3:15:00 PM	6.339	1.426	266.491
3:30:00 AM	3.923	0.632	60.452	3:30:00 PM	6.208	1.403	257.026
3:45:00 AM	3.922	0.724	72.498	3:45:00 PM	6.128	1.382	250.124
4:00:00 AM	4.064	0.687	72.241	4:00:00 PM	5.279	1.206	179.656
4:15:00 AM	5.29	1.123	168.119	4:15:00 PM	5.468	1.239	193.691
4:30:00 AM	5.472	1.191	184.4	4:30:00 PM	5.607	1.234	199.343
4:45:00 AM	5.473	1.179	184.575	4:45:00 PM	5.497	1.188	184.878
5:00:00 AM	4.622	0.911	114.036	5:00:00 PM	5.574	1.222	194.769
5:15:00 AM	4.505	0.941	113.657	5:15:00 PM	7.426	1.535	351.534
5:30:00 AM	4.604	0.93	115.815	5:30:00 PM	6.883	1.497	313.192
5:45:00 AM	4.526	0.899	109.322	5:45:00 PM	5.285	1.179	176.422
6:00:00 AM	4.446	0.815	96.853	6:00:00 PM	5.413	1.176	178.664
6:15:00 AM	4.46	0.875	104.409	6:15:00 PM	5.384	1.177	180.424
6:30:00 AM	4.332	0.756	86.67	6:30:00 PM	5.557	1.219	187.477
6:45:00 AM	4.241	0.768	85.597	6:45:00 PM	6.441	1.403	270.376
7:00:00 AM	4.373	0.828	95.807	7:00:00 PM	6.422	1.42	272.619
7:15:00 AM	4.48	0.922	110.662	7:15:00 PM	6.365	1.438	268.169
7:30:00 AM	4.427	0.777	91.767	7:30:00 PM	5.968	1.268	221.943
7:45:00 AM	4.664	0.994	125.9	7:45:00 PM	5.55	1.258	198.171
8:00:00 AM	6.437	1.449	278.64	8:00:00 PM	5.407	1.271	190.817
8:15:00 AM	4.661	1	124.656	8:15:00 PM	5.275	1.217	181.559
8:30:00 AM	4.589	1.005	124.447	8:30:00 PM	5.254	1.097	162.848
8:45:00 AM	4.654	0.933	117.872	8:45:00 PM	5.402	1.162	175.879
9:00:00 AM	4.567	0.92	110.387	9:00:00 PM	7.152	1.517	332.421
9:15:00 AM	4.631	0.952	115.993	9:15:00 PM	6.853	1.501	312.328
9:30:00 AM	4.702	0.928	118.935	9:30:00 PM	5.619	1.279	203.769
9:45:00 AM	4.678	0.946	120.373	9:45:00 PM	5.695	1.263	199.809
10:00:00 AM	4.486	0.83	99.205	10:00:00 PM	5.723	1.265	209.807
10:15:00 AM	4.588	0.915	113.418	10:15:00 PM	5.435	1.2	185.083
10:30:00 AM	5.593	1.267	204.028	10:30:00 PM	6.352	1.4	265.235
10:45:00 AM	5.58	1.215	194.113	10:45:00 PM	6.123	1.38	249.656
11:00:00 AM	5.558	1.204	192.082	11:00:00 PM	6.065	1.333	238.135
11:15:00 AM	4.823	0.989	127.968	11:15:00 PM	5.769	1.242	208.199
11:30:00 AM	4.749	0.947	122.955	11:30:00 PM	4.827	0.977	129.601
11:45:00 AM	4.775	0.985	128.821	11:45:00 PM	4.616	0.928	115.959
				Inches	Feet/Sec	GPM	
Daily Avg:				5.149	1.078	162.167	
Daily Min:				3.917	0.632	60.452	
Daily Max:				7.426	1.535	351.534	
Peak to Avg:						2.17	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/28/2023, 12:00 a.m. - 12:00 p.m.**

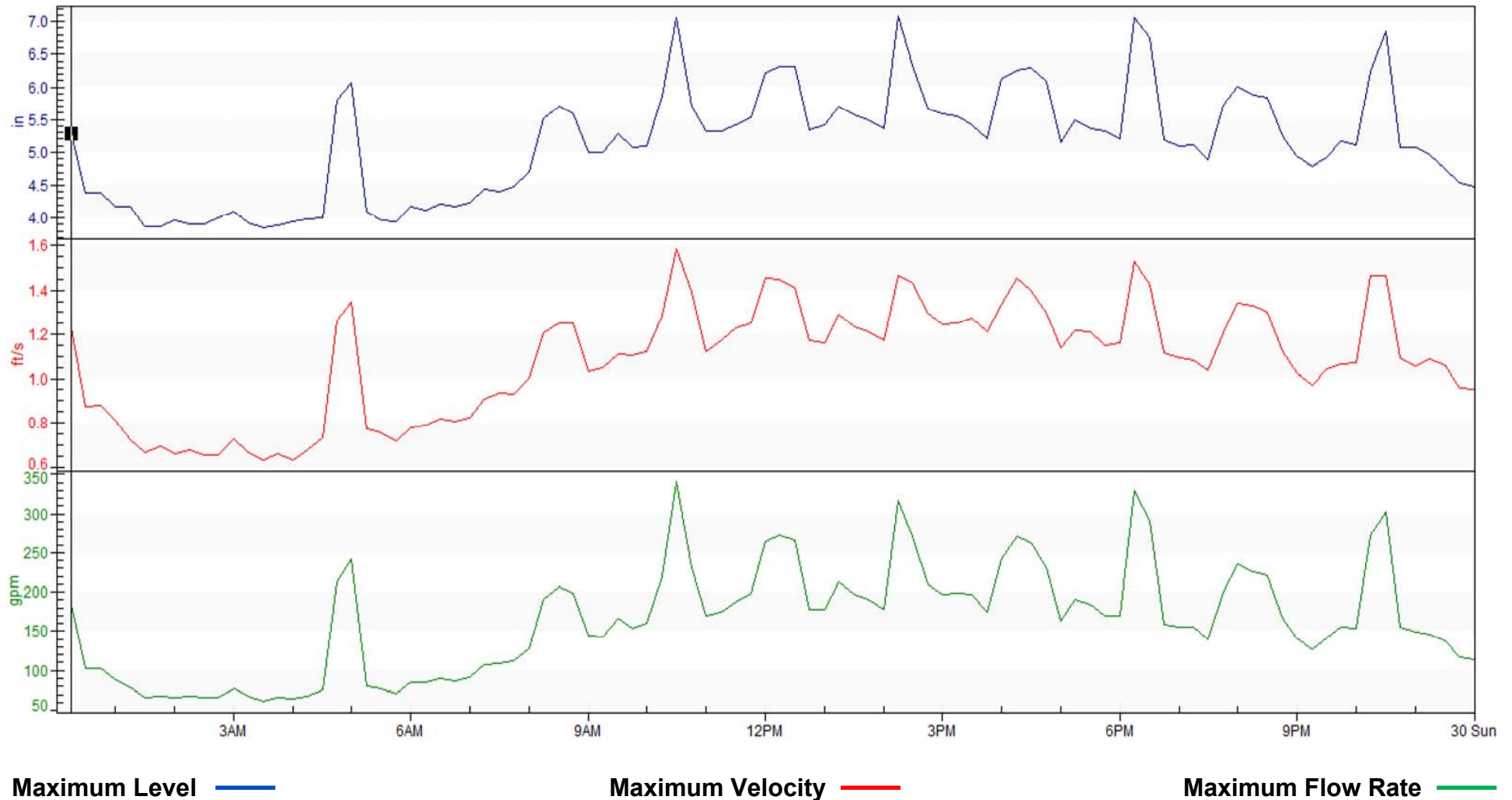
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Friday - A.M. 7/28/2023

Friday - P.M. 7/28/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	4.49	0.919	108.387	12:00:00 PM	5.649	1.252	204.209
12:15:00 AM	4.411	0.897	104.682	12:15:00 PM	4.949	1.122	152.546
12:30:00 AM	4.519	0.92	111.687	12:30:00 PM	4.904	1.053	142.696
12:45:00 AM	4.338	0.779	89.535	12:45:00 PM	4.876	1.076	141.168
1:00:00 AM	4.326	0.801	89.36	1:00:00 PM	4.894	1.087	146.925
1:15:00 AM	4.104	0.767	81.687	1:15:00 PM	5.105	1.144	163.532
1:30:00 AM	4.133	0.769	82.445	1:30:00 PM	5.093	1.172	164.24
1:45:00 AM	4.223	0.762	83.375	1:45:00 PM	5.783	1.282	215.487
2:00:00 AM	6.195	1.358	249.229	2:00:00 PM	6.922	1.463	308.053
2:15:00 AM	4.349	0.811	93.497	2:15:00 PM	5.031	1.078	151.097
2:30:00 AM	3.864	0.632	61.967	2:30:00 PM	4.983	1.046	141.985
2:45:00 AM	4.043	0.699	72.999	2:45:00 PM	4.994	1.037	143.914
3:00:00 AM	3.972	0.687	69.955	3:00:00 PM	5.135	1.093	157.337
3:15:00 AM	3.857	0.632	61.272	3:15:00 PM	5.156	1.233	175.399
3:30:00 AM	3.809	0.582	55.344	3:30:00 PM	5.284	1.141	170.649
3:45:00 AM	3.898	0.655	62.876	3:45:00 PM	6.287	1.385	259.027
4:00:00 AM	3.969	0.657	66.822	4:00:00 PM	6.364	1.419	265.398
4:15:00 AM	4.163	0.789	85.618	4:15:00 PM	6.33	1.378	254.517
4:30:00 AM	4.464	0.893	106.687	4:30:00 PM	6.164	1.328	242.24
4:45:00 AM	4.528	0.939	114.356	4:45:00 PM	5.586	1.213	190.312
5:00:00 AM	4.444	0.92	108.863	5:00:00 PM	5.532	1.16	182.869
5:15:00 AM	4.548	0.961	116.093	5:15:00 PM	5.353	1.196	181.794
5:30:00 AM	4.549	0.944	115.694	5:30:00 PM	5.221	1.163	171.096
5:45:00 AM	4.514	0.929	112.659	5:45:00 PM	5.382	1.152	176.421
6:00:00 AM	5.417	1.161	177.527	6:00:00 PM	7.122	1.581	344.703
6:15:00 AM	5.308	1.094	164.596	6:15:00 PM	7.107	1.521	330.805
6:30:00 AM	5.182	1.103	160.711	6:30:00 PM	5.273	1.146	170.902
6:45:00 AM	4.222	0.797	88.197	6:45:00 PM	5.37	1.285	196.324
7:00:00 AM	4.324	0.812	91.82	7:00:00 PM	5.368	1.199	183.113
7:15:00 AM	4.361	0.772	87.706	7:15:00 PM	5.207	1.176	169.675
7:30:00 AM	4.297	0.734	83.293	7:30:00 PM	5.116	1.112	158.651
7:45:00 AM	4.257	0.749	83.884	7:45:00 PM	6.077	1.352	242.196
8:00:00 AM	4.342	0.823	94.638	8:00:00 PM	6.127	1.389	249.655
8:15:00 AM	4.392	0.833	96.316	8:15:00 PM	5.845	1.345	227.698
8:30:00 AM	4.498	0.86	103.732	8:30:00 PM	5.628	1.234	200.417
8:45:00 AM	4.613	0.9	111.455	8:45:00 PM	5.301	1.204	180.835
9:00:00 AM	5.878	1.395	239.434	9:00:00 PM	5.26	1.203	177.309
9:15:00 AM	6.469	1.43	277.123	9:15:00 PM	5.237	1.131	167.121
9:30:00 AM	4.574	0.972	119.942	9:30:00 PM	5.346	1.191	180.165
9:45:00 AM	4.672	1.081	136.665	9:45:00 PM	5.498	1.318	207.63
10:00:00 AM	4.61	0.996	124.008	10:00:00 PM	7.015	1.601	342.025
10:15:00 AM	4.642	1.047	131.006	10:15:00 PM	5.636	1.201	195.387
10:30:00 AM	4.663	1.057	133.854	10:30:00 PM	5.354	1.173	177.98
10:45:00 AM	4.778	0.986	128.982	10:45:00 PM	5.136	1.141	164.337
11:00:00 AM	4.787	1.053	137.51	11:00:00 PM	4.817	1.001	131.535
11:15:00 AM	5.686	1.249	205.436	11:15:00 PM	4.991	1.028	142.54
11:30:00 AM	5.775	1.34	223.13	11:30:00 PM	4.92	1.013	137.919
11:45:00 AM	5.808	1.253	211.767	11:45:00 PM	5.522	1.268	199.758
				Inches	Feet/Sec	GPM	
Daily Avg:				5.074	1.071	157.800	
Daily Min:				3.809	0.582	55.344	
Daily Max:				7.122	1.601	344.703	
Peak to Avg:						2.18	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/29/2023, 12:00 a.m. - 12:00 p.m.**

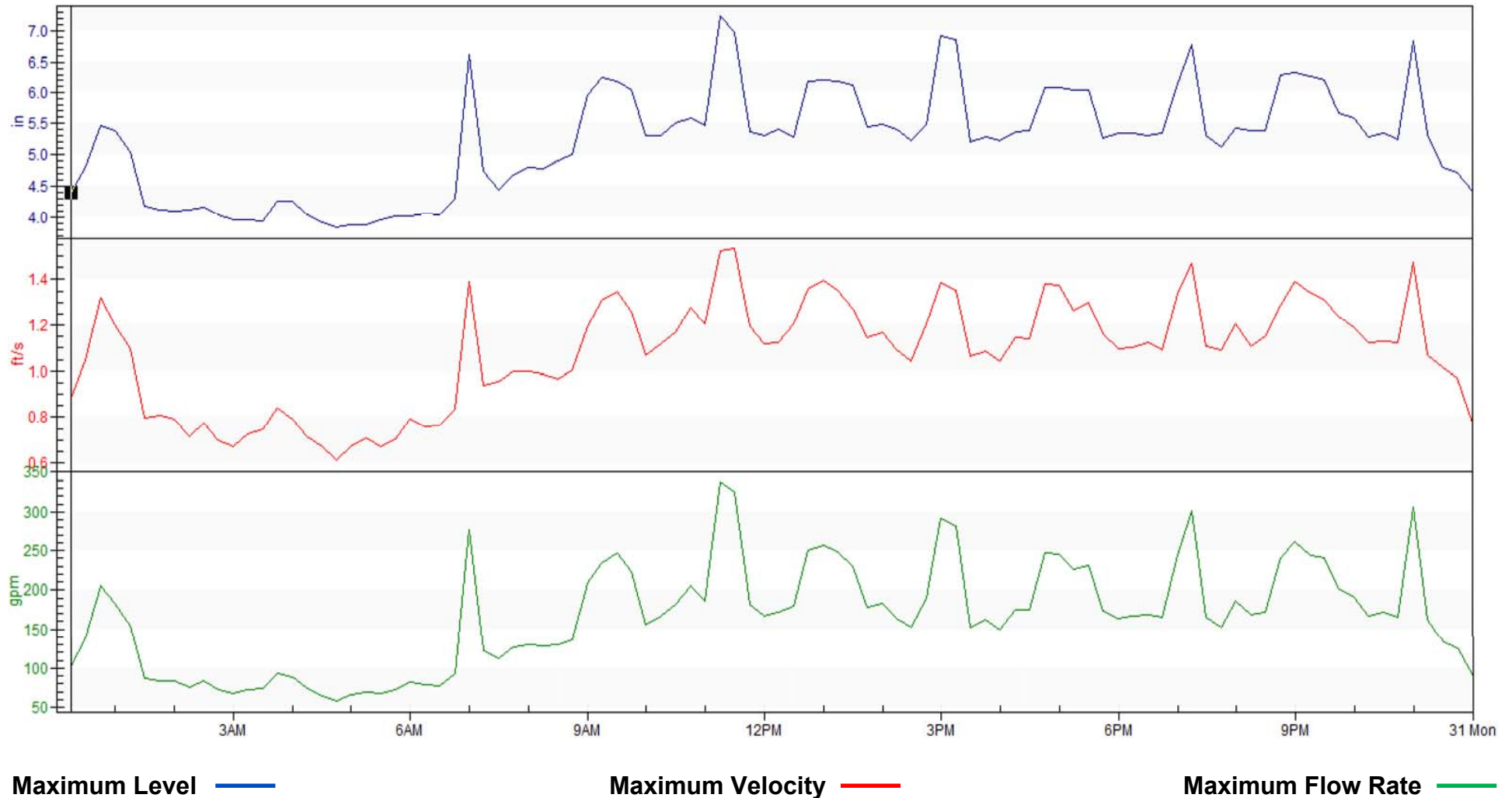
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Saturday - A.M. 7/29/2023

Saturday - P.M. 7/29/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	5.552	1.241	197.943	12:00:00 PM	6.224	1.455	264.357
12:15:00 AM	5.282	1.229	183.671	12:15:00 PM	6.324	1.449	272.886
12:30:00 AM	4.389	0.874	101.985	12:30:00 PM	6.313	1.412	265.292
12:45:00 AM	4.384	0.881	102.63	12:45:00 PM	5.348	1.172	178.071
1:00:00 AM	4.179	0.813	87.793	1:00:00 PM	5.419	1.163	177.289
1:15:00 AM	4.166	0.719	78.185	1:15:00 PM	5.707	1.293	213.759
1:30:00 AM	3.872	0.667	65.426	1:30:00 PM	5.569	1.234	197.585
1:45:00 AM	3.864	0.694	67.349	1:45:00 PM	5.501	1.211	190.845
2:00:00 AM	3.959	0.657	66.359	2:00:00 PM	5.369	1.17	178.63
2:15:00 AM	3.914	0.678	67.45	2:15:00 PM	7.081	1.468	317.704
2:30:00 AM	3.907	0.656	65.373	2:30:00 PM	6.339	1.43	270.128
2:45:00 AM	3.997	0.653	66.439	2:45:00 PM	5.664	1.297	210.39
3:00:00 AM	4.108	0.73	77.837	3:00:00 PM	5.592	1.247	197.863
3:15:00 AM	3.935	0.664	66.833	3:15:00 PM	5.552	1.252	199.304
3:30:00 AM	3.85	0.631	61.593	3:30:00 PM	5.422	1.274	197.067
3:45:00 AM	3.892	0.662	65.57	3:45:00 PM	5.204	1.211	173.904
4:00:00 AM	3.955	0.634	64.211	4:00:00 PM	6.131	1.338	242.298
4:15:00 AM	3.98	0.677	68.061	4:15:00 PM	6.259	1.452	269.994
4:30:00 AM	3.994	0.734	75.351	4:30:00 PM	6.298	1.4	262.333
4:45:00 AM	5.796	1.263	212.961	4:45:00 PM	6.08	1.298	230.032
5:00:00 AM	6.073	1.348	241.354	5:00:00 PM	5.154	1.137	164.209
5:15:00 AM	4.098	0.772	80.004	5:15:00 PM	5.485	1.218	191.203
5:30:00 AM	3.968	0.758	76.721	5:30:00 PM	5.363	1.215	184.675
5:45:00 AM	3.939	0.715	71.341	5:45:00 PM	5.327	1.148	170.327
6:00:00 AM	4.178	0.776	84.742	6:00:00 PM	5.21	1.162	170.579
6:15:00 AM	4.118	0.791	84.703	6:15:00 PM	7.064	1.528	329.808
6:30:00 AM	4.219	0.818	90.505	6:30:00 PM	6.746	1.426	290.925
6:45:00 AM	4.173	0.803	87.587	6:45:00 PM	5.195	1.117	159.474
7:00:00 AM	4.242	0.822	91.597	7:00:00 PM	5.088	1.094	155.704
7:15:00 AM	4.44	0.908	107.614	7:15:00 PM	5.115	1.082	155.016
7:30:00 AM	4.402	0.935	109.536	7:30:00 PM	4.884	1.038	139.908
7:45:00 AM	4.49	0.93	111.99	7:45:00 PM	5.716	1.206	199.825
8:00:00 AM	4.716	1.003	128.943	8:00:00 PM	6.01	1.342	235.903
8:15:00 AM	5.522	1.204	190.75	8:15:00 PM	5.872	1.331	225.61
8:30:00 AM	5.697	1.254	206.568	8:30:00 PM	5.845	1.3	221.561
8:45:00 AM	5.589	1.252	197.991	8:45:00 PM	5.251	1.123	166.512
9:00:00 AM	4.994	1.034	143.539	9:00:00 PM	4.934	1.029	140.539
9:15:00 AM	4.997	1.047	142.366	9:15:00 PM	4.788	0.971	127.195
9:30:00 AM	5.275	1.113	166.036	9:30:00 PM	4.915	1.041	141.507
9:45:00 AM	5.064	1.107	154.409	9:45:00 PM	5.169	1.066	154.807
10:00:00 AM	5.1	1.119	159.755	10:00:00 PM	5.111	1.074	153.678
10:15:00 AM	5.865	1.283	219.657	10:15:00 PM	6.248	1.466	272.038
10:30:00 AM	7.054	1.585	340.542	10:30:00 PM	6.845	1.468	302.777
10:45:00 AM	5.708	1.393	230.277	10:45:00 PM	5.075	1.096	155.375
11:00:00 AM	5.331	1.12	169.417	11:00:00 PM	5.069	1.055	149.303
11:15:00 AM	5.316	1.172	174.843	11:15:00 PM	4.967	1.09	146.302
11:30:00 AM	5.421	1.231	187.248	11:30:00 PM	4.758	1.061	138.046
11:45:00 AM	5.536	1.252	198.946	11:45:00 PM	4.532	0.957	116.682
				Inches Feet/Sec GPM			
				Daily Avg: 5.138 1.086 163.824			
				Daily Min: 3.85 0.631 61.593			
				Daily Max: 7.081 1.585 340.542			
				Peak to Avg: 2.08			

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/30/2023, 12:00 a.m. - 12:00 p.m.**

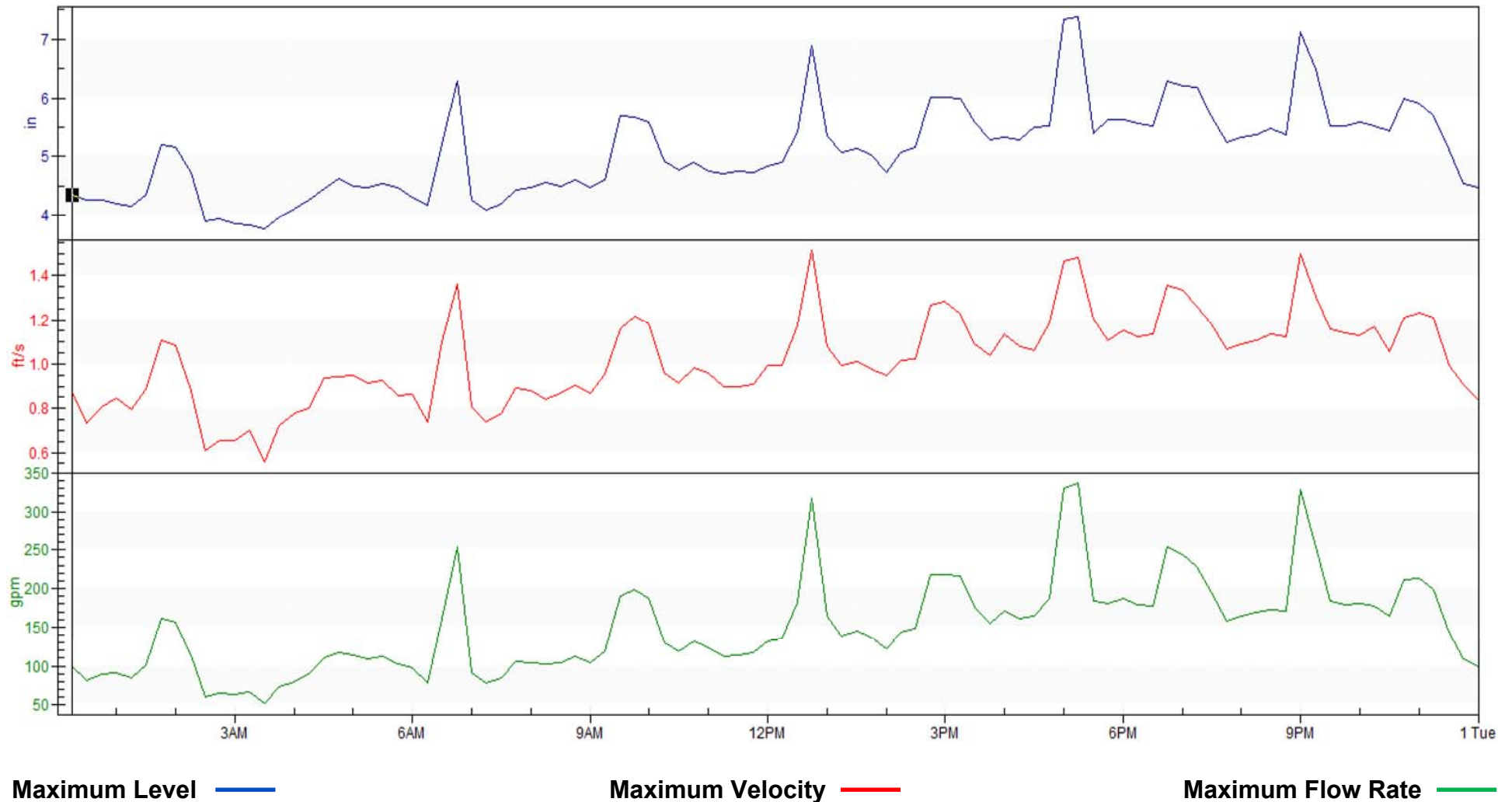
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Sunday - A.M. 7/30/2023

Sunday - P.M. 7/30/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	4.474	0.951	113.966	12:00:00 PM	5.306	1.117	167.891
12:15:00 AM	4.405	0.885	103.828	12:15:00 PM	5.406	1.122	172.173
12:30:00 AM	4.809	1.046	138.038	12:30:00 PM	5.292	1.208	180.537
12:45:00 AM	5.463	1.318	205.933	12:45:00 PM	6.189	1.361	249.515
1:00:00 AM	5.384	1.203	183.272	1:00:00 PM	6.212	1.399	256.707
1:15:00 AM	5.051	1.098	154.736	1:15:00 PM	6.19	1.352	247.89
1:30:00 AM	4.176	0.795	86.693	1:30:00 PM	6.121	1.269	229.464
1:45:00 AM	4.114	0.808	84.237	1:45:00 PM	5.45	1.146	178.393
2:00:00 AM	4.093	0.794	83.433	2:00:00 PM	5.492	1.168	183.694
2:15:00 AM	4.118	0.717	76.733	2:15:00 PM	5.405	1.092	163.41
2:30:00 AM	4.157	0.773	83.783	2:30:00 PM	5.219	1.042	152.928
2:45:00 AM	4.033	0.7	72.78	2:45:00 PM	5.492	1.208	190.03
3:00:00 AM	3.948	0.67	67.651	3:00:00 PM	6.92	1.385	291.492
3:15:00 AM	3.95	0.727	72.886	3:15:00 PM	6.86	1.352	281.705
3:30:00 AM	3.939	0.748	74.336	3:30:00 PM	5.211	1.062	153.144
3:45:00 AM	4.254	0.841	94.109	3:45:00 PM	5.276	1.086	162.153
4:00:00 AM	4.25	0.793	88.608	4:00:00 PM	5.232	1.044	149.922
4:15:00 AM	4.029	0.715	74.239	4:15:00 PM	5.366	1.146	174.935
4:30:00 AM	3.907	0.674	65.465	4:30:00 PM	5.391	1.138	174.774
4:45:00 AM	3.835	0.611	58.784	4:45:00 PM	6.089	1.38	247.799
5:00:00 AM	3.871	0.672	66.099	5:00:00 PM	6.091	1.376	245.063
5:15:00 AM	3.875	0.71	69.887	5:15:00 PM	6.053	1.267	225.804
5:30:00 AM	3.957	0.67	67.935	5:30:00 PM	6.052	1.298	231.404
5:45:00 AM	4.022	0.703	72.274	5:45:00 PM	5.254	1.164	172.839
6:00:00 AM	4.009	0.793	81.617	6:00:00 PM	5.345	1.098	164.171
6:15:00 AM	4.048	0.756	78.847	6:15:00 PM	5.344	1.102	167.242
6:30:00 AM	4.037	0.764	78.026	6:30:00 PM	5.309	1.124	169.19
6:45:00 AM	4.307	0.837	94.007	6:45:00 PM	5.343	1.091	165.583
7:00:00 AM	6.617	1.393	277.697	7:00:00 PM	6.142	1.339	243.043
7:15:00 AM	4.74	0.939	121.577	7:15:00 PM	6.773	1.469	301.246
7:30:00 AM	4.441	0.954	113.208	7:30:00 PM	5.301	1.109	164.926
7:45:00 AM	4.687	1	127.498	7:45:00 PM	5.129	1.091	153.219
8:00:00 AM	4.81	0.998	130.965	8:00:00 PM	5.419	1.205	186.296
8:15:00 AM	4.786	0.987	128.194	8:15:00 PM	5.387	1.106	169.007
8:30:00 AM	4.903	0.964	130.457	8:30:00 PM	5.383	1.15	171.625
8:45:00 AM	4.994	1.005	136.159	8:45:00 PM	6.284	1.288	240.611
9:00:00 AM	5.968	1.194	209.01	9:00:00 PM	6.33	1.39	262.151
9:15:00 AM	6.241	1.31	234.28	9:15:00 PM	6.269	1.341	243.658
9:30:00 AM	6.19	1.35	247.624	9:30:00 PM	6.214	1.307	240.845
9:45:00 AM	6.04	1.258	223.597	9:45:00 PM	5.672	1.238	202.25
10:00:00 AM	5.309	1.071	156.445	10:00:00 PM	5.579	1.192	191.269
10:15:00 AM	5.314	1.117	167.142	10:15:00 PM	5.283	1.126	167.126
10:30:00 AM	5.514	1.17	180.867	10:30:00 PM	5.346	1.13	171.669
10:45:00 AM	5.591	1.276	205.354	10:45:00 PM	5.242	1.124	165.347
11:00:00 AM	5.47	1.208	186.317	11:00:00 PM	6.835	1.473	305.388
11:15:00 AM	7.236	1.52	337.768	11:15:00 PM	5.33	1.068	161.528
11:30:00 AM	6.97	1.533	325.633	11:30:00 PM	4.808	1.018	133.528
11:45:00 AM	5.373	1.196	182.165	11:45:00 PM	4.729	0.969	125.087
				Inches	Feet/Sec	GPM	
Daily Avg:				5.238	1.084	166.841	
Daily Min:				3.835	0.611	58.784	
Daily Max:				7.236	1.533	337.768	
Peak to Avg:						2.02	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/31/2023, 12:00 a.m. - 12:00 p.m.**

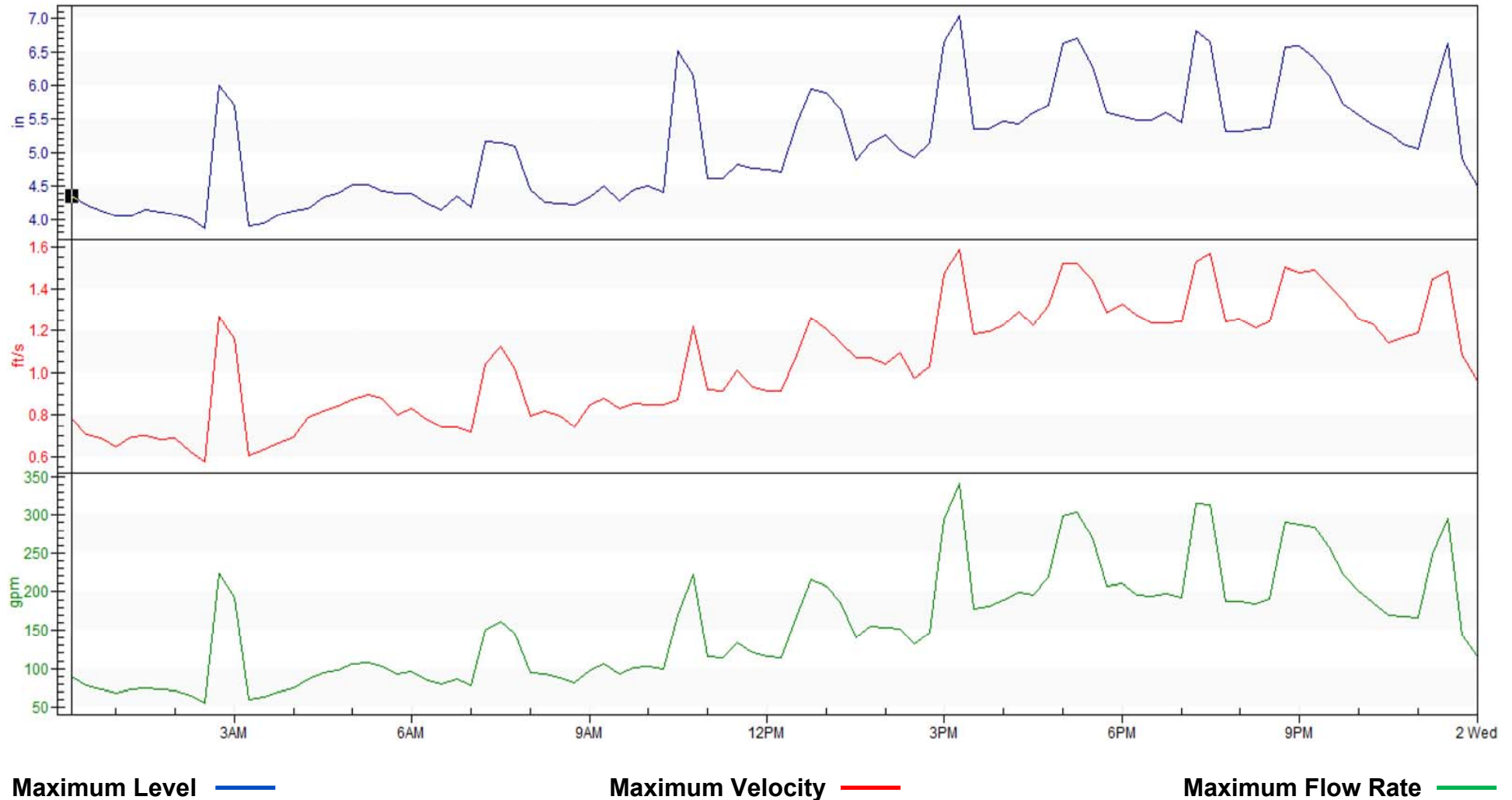
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Monday - A.M. 7/31/2023

Monday - P.M. 7/31/2023

Time	Level	Velocity	Velocity	Time	Level	Velocity	Flow
12:10:00 AM	4.421	0.773	90.479	12:00:00 PM	4.828	0.991	131.475
12:15:00 AM	4.351	0.873	98.746	12:15:00 PM	4.907	0.993	134.631
12:30:00 AM	4.251	0.733	81.898	12:30:00 PM	5.413	1.176	181.576
12:45:00 AM	4.26	0.805	89.226	12:45:00 PM	6.892	1.515	316.575
1:00:00 AM	4.192	0.845	91.419	1:00:00 PM	5.354	1.077	163.897
1:15:00 AM	4.143	0.795	84.986	1:15:00 PM	5.06	0.991	137.829
1:30:00 AM	4.338	0.884	101.537	1:30:00 PM	5.139	1.009	145.395
1:45:00 AM	5.204	1.108	161.041	1:45:00 PM	5.028	0.977	136.815
2:00:00 AM	5.156	1.082	156.714	2:00:00 PM	4.72	0.949	122.211
2:15:00 AM	4.72	0.881	113.376	2:15:00 PM	5.059	1.016	143.505
2:30:00 AM	3.883	0.609	60.137	2:30:00 PM	5.16	1.024	148.375
2:45:00 AM	3.931	0.656	65.555	2:45:00 PM	6.011	1.267	218.248
3:00:00 AM	3.853	0.652	63.671	3:00:00 PM	6.009	1.282	218.805
3:15:00 AM	3.819	0.698	67.359	3:15:00 PM	5.996	1.228	216.264
3:30:00 AM	3.761	0.557	52.674	3:30:00 PM	5.593	1.087	175.07
3:45:00 AM	3.949	0.721	72.817	3:45:00 PM	5.272	1.04	155.132
4:00:00 AM	4.097	0.776	80.725	4:00:00 PM	5.32	1.136	171.345
4:15:00 AM	4.25	0.801	89.478	4:15:00 PM	5.284	1.081	161.185
4:30:00 AM	4.442	0.937	111.117	4:30:00 PM	5.492	1.064	163.629
4:45:00 AM	4.628	0.94	117.88	4:45:00 PM	5.522	1.186	187.907
5:00:00 AM	4.485	0.949	113.359	5:00:00 PM	7.334	1.463	330.164
5:15:00 AM	4.472	0.913	109.289	5:15:00 PM	7.383	1.478	336.216
5:30:00 AM	4.531	0.924	112.616	5:30:00 PM	5.383	1.201	184.028
5:45:00 AM	4.459	0.855	101.965	5:45:00 PM	5.636	1.108	180.176
6:00:00 AM	4.29	0.865	97.847	6:00:00 PM	5.63	1.151	186.984
6:15:00 AM	4.164	0.737	78.437	6:15:00 PM	5.566	1.122	179.5
6:30:00 AM	5.21	1.099	161.407	6:30:00 PM	5.521	1.135	177.833
6:45:00 AM	6.279	1.363	254.385	6:45:00 PM	6.295	1.356	253.236
7:00:00 AM	4.255	0.809	90.526	7:00:00 PM	6.202	1.333	244.022
7:15:00 AM	4.083	0.741	78.425	7:15:00 PM	6.185	1.261	227.276
7:30:00 AM	4.191	0.781	85.274	7:30:00 PM	5.695	1.181	194.741
7:45:00 AM	4.422	0.894	105.39	7:45:00 PM	5.246	1.067	158.014
8:00:00 AM	4.462	0.88	104.501	8:00:00 PM	5.325	1.088	164.277
8:15:00 AM	4.556	0.839	102.396	8:15:00 PM	5.374	1.107	169.282
8:30:00 AM	4.48	0.867	104.095	8:30:00 PM	5.479	1.133	173.194
8:45:00 AM	4.599	0.901	112.04	8:45:00 PM	5.361	1.123	171.2
9:00:00 AM	4.465	0.87	103.997	9:00:00 PM	7.135	1.5	327.671
9:15:00 AM	4.594	0.953	118.242	9:15:00 PM	6.478	1.307	253.692
9:30:00 AM	5.699	1.158	191.055	9:30:00 PM	5.526	1.156	183.218
9:45:00 AM	5.66	1.214	198.53	9:45:00 PM	5.514	1.139	179.34
10:00:00 AM	5.592	1.182	187.143	10:00:00 PM	5.574	1.128	179.869
10:15:00 AM	4.918	0.959	129.673	10:15:00 PM	5.526	1.166	177.493
10:30:00 AM	4.758	0.916	119.017	10:30:00 PM	5.428	1.058	163.792
10:45:00 AM	4.89	0.981	132.362	10:45:00 PM	5.987	1.207	211.771
11:00:00 AM	4.742	0.957	124.008	11:00:00 PM	5.904	1.234	213.002
11:15:00 AM	4.707	0.896	113.143	11:15:00 PM	5.69	1.207	198.68
11:30:00 AM	4.739	0.897	113.285	11:30:00 PM	5.114	0.995	142.539
11:45:00 AM	4.729	0.907	117.14	11:45:00 PM	4.541	0.908	108.431
				Inches	Feet/Sec	GPM	
Daily Avg:				5.092	1.022	150.731	
Daily Min:				3.761	0.557	52.674	
Daily Max:				7.383	1.515	336.216	
Peak to Avg:						2.23	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/1/2023, 12:00 a.m. - 12:00 p.m.**

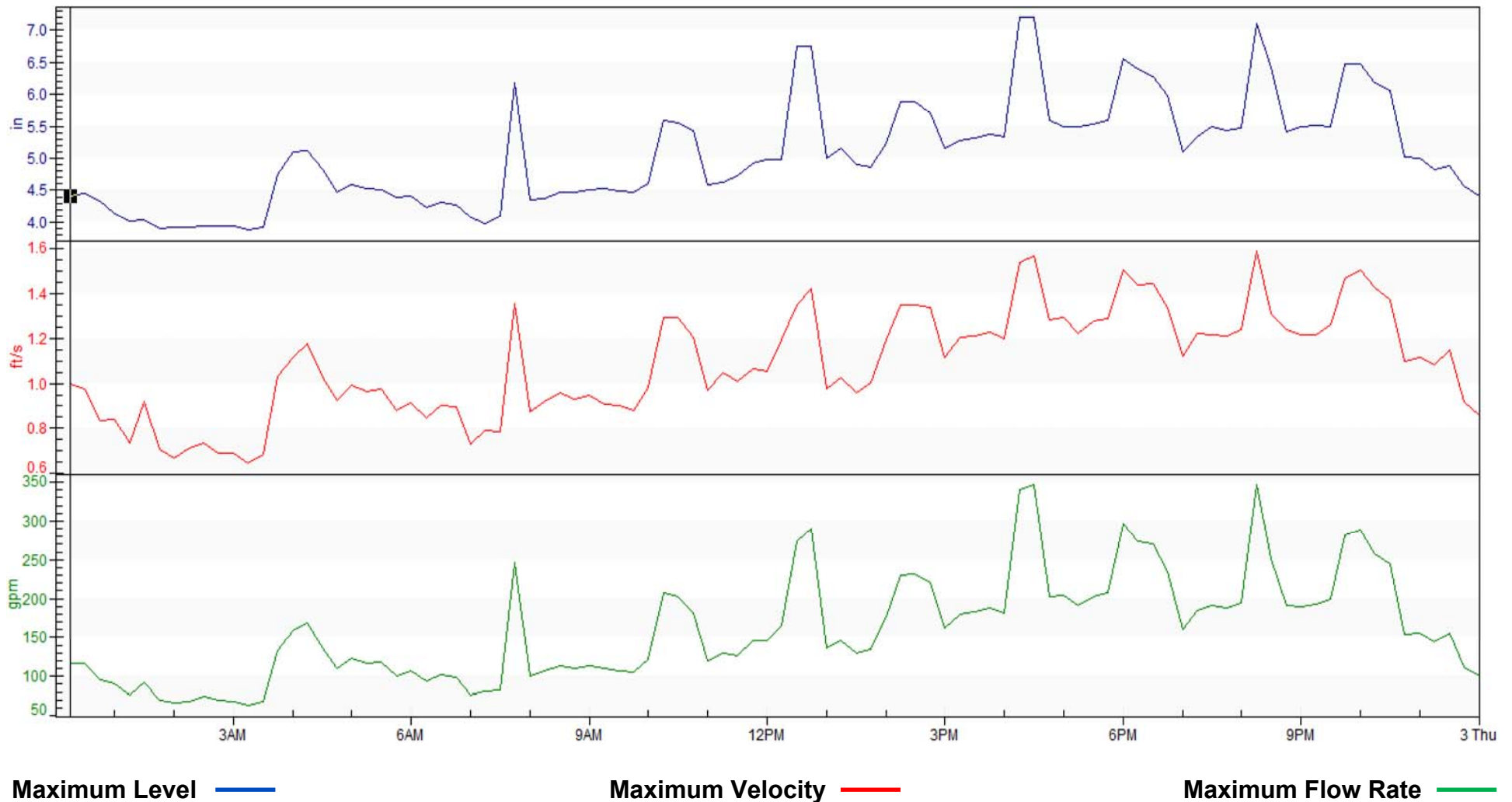
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Tuesday- A.M. 8/1/2023

Tuesday- P.M. 8/1/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	4.464	0.836	99.795	12:00:00 PM	4.74	0.916	115.103
12:15:00 AM	4.359	0.783	90.052	12:15:00 PM	4.705	0.914	114.941
12:30:00 AM	4.228	0.704	78.069	12:30:00 PM	5.421	1.082	167.32
12:45:00 AM	4.136	0.689	73.469	12:45:00 PM	5.948	1.263	214.862
1:00:00 AM	4.053	0.648	67.833	1:00:00 PM	5.892	1.206	207.73
1:15:00 AM	4.054	0.693	72.528	1:15:00 PM	5.644	1.14	185.746
1:30:00 AM	4.138	0.701	74.774	1:30:00 PM	4.88	1.07	140.696
1:45:00 AM	4.113	0.68	72.675	1:45:00 PM	5.152	1.07	154.844
2:00:00 AM	4.072	0.687	72.392	2:00:00 PM	5.252	1.038	153.984
2:15:00 AM	4.015	0.624	64.489	2:15:00 PM	5.033	1.093	151.638
2:30:00 AM	3.864	0.574	55.72	2:30:00 PM	4.918	0.973	132.347
2:45:00 AM	6.008	1.27	224.29	2:45:00 PM	5.147	1.03	147.344
3:00:00 AM	5.7	1.163	191.936	3:00:00 PM	6.64	1.47	294.153
3:15:00 AM	3.895	0.604	59.88	3:15:00 PM	7.043	1.585	340.996
3:30:00 AM	3.942	0.634	63.89	3:30:00 PM	5.353	1.182	178.159
3:45:00 AM	4.064	0.661	69.488	3:45:00 PM	5.348	1.198	181.974
4:00:00 AM	4.124	0.696	74.649	4:00:00 PM	5.47	1.228	189.798
4:15:00 AM	4.159	0.792	85.904	4:15:00 PM	5.429	1.294	199.031
4:30:00 AM	4.331	0.821	94.064	4:30:00 PM	5.588	1.225	195.664
4:45:00 AM	4.387	0.844	97.337	4:45:00 PM	5.709	1.32	218.239
5:00:00 AM	4.515	0.875	106.163	5:00:00 PM	6.62	1.52	299.55
5:15:00 AM	4.514	0.899	107.272	5:15:00 PM	6.708	1.52	304.343
5:30:00 AM	4.432	0.88	103.395	5:30:00 PM	6.298	1.439	269.59
5:45:00 AM	4.388	0.8	93.362	5:45:00 PM	5.599	1.288	207.47
6:00:00 AM	4.385	0.83	96.787	6:00:00 PM	5.547	1.327	211.188
6:15:00 AM	4.243	0.777	84.849	6:15:00 PM	5.478	1.275	196.721
6:30:00 AM	4.154	0.742	80.36	6:30:00 PM	5.477	1.238	193.589
6:45:00 AM	4.355	0.744	85.98	6:45:00 PM	5.601	1.238	196.765
7:00:00 AM	4.185	0.715	77.704	7:00:00 PM	5.448	1.243	193.43
7:15:00 AM	5.164	1.038	150.627	7:15:00 PM	6.82	1.525	314.57
7:30:00 AM	5.138	1.125	162.183	7:30:00 PM	6.645	1.564	313.405
7:45:00 AM	5.09	1.018	144.905	7:45:00 PM	5.316	1.244	187.523
8:00:00 AM	4.441	0.792	93.975	8:00:00 PM	5.305	1.253	188.382
8:15:00 AM	4.268	0.822	92.395	8:15:00 PM	5.359	1.215	183.748
8:30:00 AM	4.234	0.796	88.512	8:30:00 PM	5.374	1.246	190.551
8:45:00 AM	4.216	0.74	81.78	8:45:00 PM	6.566	1.501	290.51
9:00:00 AM	4.341	0.847	97.371	9:00:00 PM	6.596	1.477	288.228
9:15:00 AM	4.5	0.882	106.438	9:15:00 PM	6.398	1.487	284.141
9:30:00 AM	4.272	0.832	92.967	9:30:00 PM	6.154	1.418	258.125
9:45:00 AM	4.447	0.857	101.14	9:45:00 PM	5.724	1.346	222.102
10:00:00 AM	4.507	0.852	103.12	10:00:00 PM	5.566	1.255	200.829
10:15:00 AM	4.418	0.847	99.768	10:15:00 PM	5.416	1.23	186.039
10:30:00 AM	6.524	0.87	170.461	10:30:00 PM	5.302	1.14	170.306
10:45:00 AM	6.157	1.22	222.199	10:45:00 PM	5.116	1.169	167.5
11:00:00 AM	4.622	0.92	115.128	11:00:00 PM	5.044	1.191	166.642
11:15:00 AM	4.621	0.912	114.127	11:15:00 PM	5.88	1.448	248.769
11:30:00 AM	4.826	1.011	134.064	11:30:00 PM	6.621	1.481	294.991
11:45:00 AM	4.763	0.93	121.113	11:45:00 PM	4.892	1.083	143.023
				Inches	Feet/Sec	GPM	
Daily Avg:				5.090	1.047	156.507	
Daily Min:				3.864	0.574	55.72	
Daily Max:				7.043	1.585	340.996	
Peak to Avg:						2.18	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/2/2023, 12:00 a.m. - 12:00 p.m.**

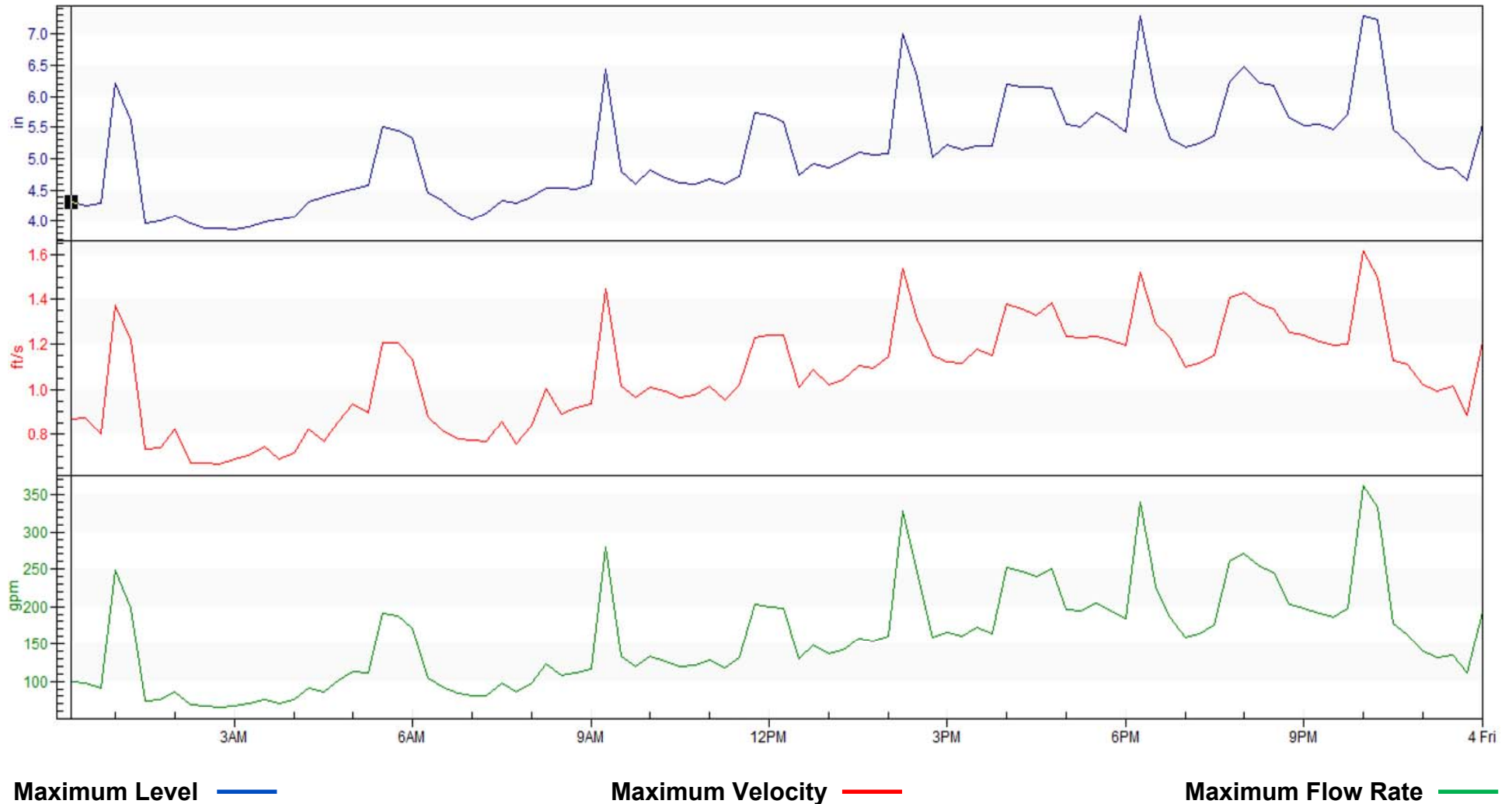
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Wednesday - A.M. 8/2/2023

Wednesday - P.M. 8/2/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	4.51	0.962	116.522	12:00:00 PM	4.979	1.052	145.421
12:15:00 AM	4.414	0.997	117.262	12:15:00 PM	4.973	1.194	164.749
12:30:00 AM	4.459	0.975	116.32	12:30:00 PM	6.758	1.35	273.455
12:45:00 AM	4.325	0.838	95.171	12:45:00 PM	6.755	1.421	290.489
1:00:00 AM	4.125	0.843	90.437	1:00:00 PM	5.003	0.978	136.069
1:15:00 AM	4.026	0.734	76.21	1:15:00 PM	5.158	1.025	146.083
1:30:00 AM	4.029	0.92	92.64	1:30:00 PM	4.896	0.958	129.581
1:45:00 AM	3.897	0.704	69.903	1:45:00 PM	4.855	1.001	133.829
2:00:00 AM	3.913	0.666	65.824	2:00:00 PM	5.244	1.196	177.025
2:15:00 AM	3.909	0.71	68.705	2:15:00 PM	5.877	1.35	230.236
2:30:00 AM	3.937	0.736	74.096	2:30:00 PM	5.884	1.353	232.581
2:45:00 AM	3.946	0.689	69.601	2:45:00 PM	5.698	1.337	220.631
3:00:00 AM	3.941	0.69	68.169	3:00:00 PM	5.165	1.118	161.976
3:15:00 AM	3.878	0.645	63.557	3:15:00 PM	5.275	1.208	180.207
3:30:00 AM	3.919	0.684	67.659	3:30:00 PM	5.319	1.209	182.384
3:45:00 AM	4.739	1.029	133.194	3:45:00 PM	5.369	1.227	187.394
4:00:00 AM	5.089	1.113	158.394	4:00:00 PM	5.325	1.202	181.503
4:15:00 AM	5.127	1.177	168.998	4:15:00 PM	7.204	1.543	341.038
4:30:00 AM	4.816	1.026	135.741	4:30:00 PM	7.203	1.569	346.595
4:45:00 AM	4.477	0.922	110.001	4:45:00 PM	5.591	1.282	202.474
5:00:00 AM	4.58	0.991	122.568	5:00:00 PM	5.491	1.297	203.962
5:15:00 AM	4.522	0.963	117.05	5:15:00 PM	5.488	1.222	191.089
5:30:00 AM	4.514	0.975	117.617	5:30:00 PM	5.531	1.279	203.01
5:45:00 AM	4.393	0.878	100.667	5:45:00 PM	5.597	1.287	207.388
6:00:00 AM	4.406	0.913	107.138	6:00:00 PM	6.546	1.51	296.973
6:15:00 AM	4.243	0.847	94.444	6:15:00 PM	6.398	1.439	274.186
6:30:00 AM	4.32	0.901	101.708	6:30:00 PM	6.285	1.448	270.684
6:45:00 AM	4.263	0.896	99.077	6:45:00 PM	5.984	1.342	235.691
7:00:00 AM	4.066	0.727	76.511	7:00:00 PM	5.093	1.122	159.885
7:15:00 AM	3.987	0.789	80.663	7:15:00 PM	5.343	1.22	185.122
7:30:00 AM	4.093	0.784	83.208	7:30:00 PM	5.483	1.215	190.602
7:45:00 AM	6.171	1.359	245.813	7:45:00 PM	5.435	1.213	188.206
8:00:00 AM	4.346	0.875	100.724	8:00:00 PM	5.471	1.241	194.265
8:15:00 AM	4.378	0.922	107.221	8:15:00 PM	7.108	1.592	346.156
8:30:00 AM	4.463	0.957	113.367	8:30:00 PM	6.42	1.313	252.043
8:45:00 AM	4.463	0.928	109.757	8:45:00 PM	5.42	1.237	191.167
9:00:00 AM	4.501	0.945	112.825	9:00:00 PM	5.496	1.214	189.561
9:15:00 AM	4.523	0.907	110.209	9:15:00 PM	5.521	1.216	192.481
9:30:00 AM	4.482	0.901	106.825	9:30:00 PM	5.499	1.263	198.881
9:45:00 AM	4.468	0.881	104.911	9:45:00 PM	6.47	1.47	281.882
10:00:00 AM	4.605	0.98	121.114	10:00:00 PM	6.482	1.506	289.218
10:15:00 AM	5.59	1.296	207.877	10:15:00 PM	6.182	1.428	258.284
10:30:00 AM	5.542	1.292	202.264	10:30:00 PM	6.062	1.374	245.397
10:45:00 AM	5.426	1.203	182.223	10:45:00 PM	5.018	1.1	153.698
11:00:00 AM	4.584	0.971	119.65	11:00:00 PM	5	1.115	154.997
11:15:00 AM	4.625	1.046	129.267	11:15:00 PM	4.83	1.084	143.933
11:30:00 AM	4.729	1.011	126.269	11:30:00 PM	4.89	1.148	154.913
11:45:00 AM	4.928	1.067	145.505	11:45:00 PM	4.564	0.917	111.818
				Inches	Feet/Sec	GPM	
Daily Avg:				5.072	1.091	161.238	
Daily Min:				3.878	0.645	63.557	
Daily Max:				7.204	1.592	346.595	
Peak to Avg:						2.15	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/3/2023, 12:00 a.m. - 12:00 p.m.**

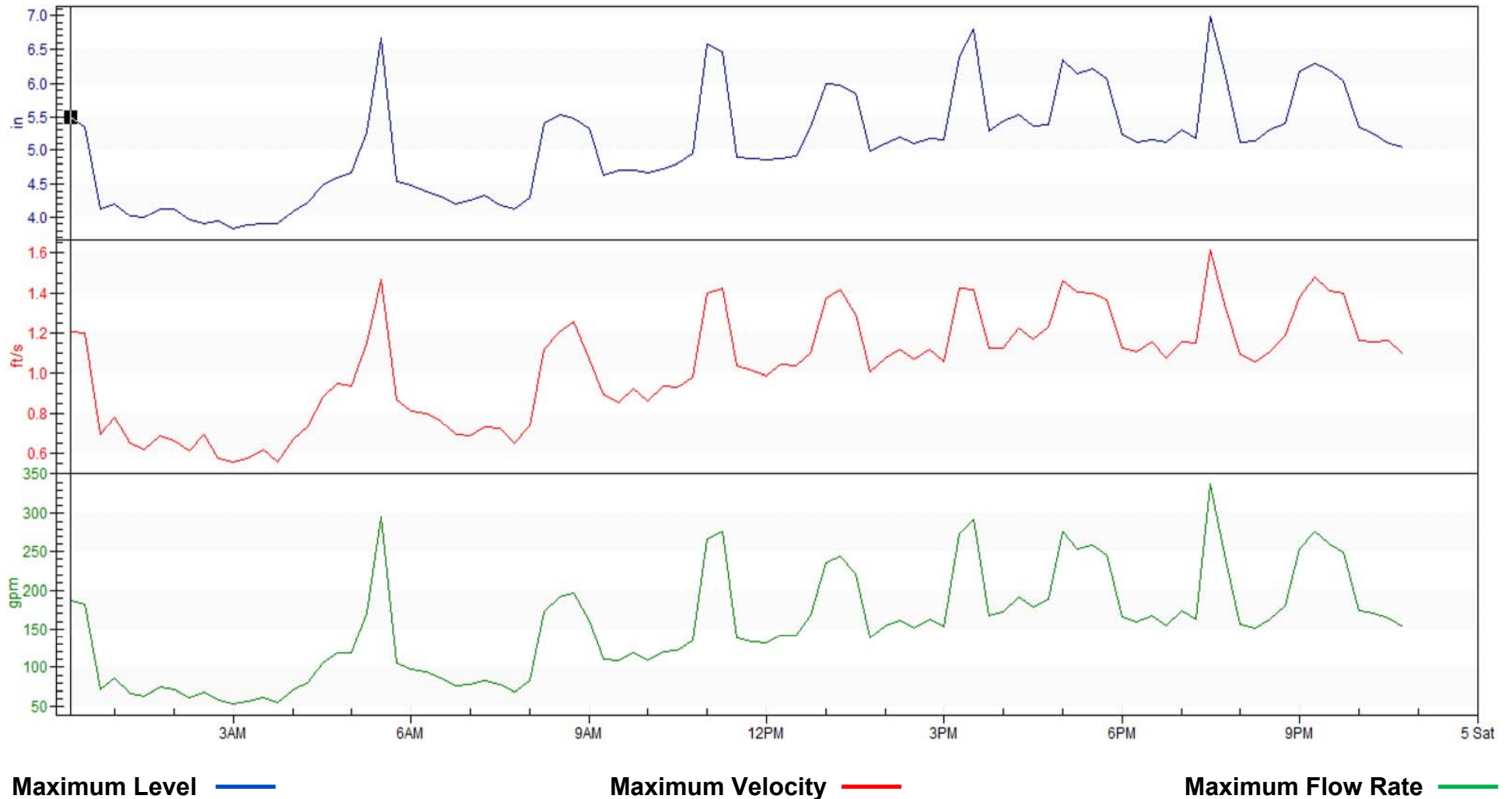
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Thursday - A.M. 8/3/2023

Thursday - P.M. 8/3/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	4.412	0.855	100.557	12:00:00 PM	5.692	1.24	199.919
12:15:00 AM	4.311	0.868	98.875	12:15:00 PM	5.595	1.238	198.121
12:30:00 AM	4.252	0.877	97.542	12:30:00 PM	4.733	1.009	130.435
12:45:00 AM	4.29	0.801	90.68	12:45:00 PM	4.928	1.087	148.279
1:00:00 AM	6.21	1.375	248.747	1:00:00 PM	4.849	1.02	136.141
1:15:00 AM	5.614	1.219	197.269	1:15:00 PM	4.954	1.041	141.482
1:30:00 AM	3.961	0.732	73.992	1:30:00 PM	5.101	1.106	157.916
1:45:00 AM	4.001	0.742	74.92	1:45:00 PM	5.065	1.093	153.698
2:00:00 AM	4.089	0.826	85.88	2:00:00 PM	5.075	1.141	161.245
2:15:00 AM	3.975	0.675	68.782	2:15:00 PM	7.005	1.535	327.938
2:30:00 AM	3.893	0.67	66.423	2:30:00 PM	6.309	1.314	246.803
2:45:00 AM	3.884	0.667	65.86	2:45:00 PM	5.013	1.149	158.584
3:00:00 AM	3.864	0.688	66.911	3:00:00 PM	5.216	1.122	164.966
3:15:00 AM	3.899	0.709	70.388	3:15:00 PM	5.135	1.118	160.483
3:30:00 AM	3.995	0.743	75.963	3:30:00 PM	5.197	1.177	171.856
3:45:00 AM	4.034	0.689	71.166	3:45:00 PM	5.192	1.147	163.49
4:00:00 AM	4.069	0.717	74.94	4:00:00 PM	6.204	1.379	251.582
4:15:00 AM	4.308	0.822	90.767	4:15:00 PM	6.159	1.356	247.086
4:30:00 AM	4.398	0.766	86.377	4:30:00 PM	6.161	1.33	240.449
4:45:00 AM	4.443	0.859	101.931	4:45:00 PM	6.133	1.385	251.019
5:00:00 AM	4.512	0.937	113.582	5:00:00 PM	5.551	1.235	196.881
5:15:00 AM	4.579	0.896	110.778	5:15:00 PM	5.511	1.229	193.741
5:30:00 AM	5.51	1.208	190.757	5:30:00 PM	5.737	1.232	205.03
5:45:00 AM	5.448	1.206	187.235	5:45:00 PM	5.611	1.218	194.988
6:00:00 AM	5.326	1.132	170.973	6:00:00 PM	5.429	1.193	184.718
6:15:00 AM	4.462	0.878	103.831	6:15:00 PM	7.287	1.522	340.907
6:30:00 AM	4.333	0.82	92.989	6:30:00 PM	5.985	1.292	226.99
6:45:00 AM	4.132	0.777	83.593	6:45:00 PM	5.318	1.23	185.429
7:00:00 AM	4.033	0.776	80.717	7:00:00 PM	5.179	1.099	159.139
7:15:00 AM	4.128	0.765	81.567	7:15:00 PM	5.233	1.113	164.383
7:30:00 AM	4.326	0.859	98.283	7:30:00 PM	5.373	1.149	175.588
7:45:00 AM	4.285	0.759	85.733	7:45:00 PM	6.225	1.409	260.229
8:00:00 AM	4.397	0.839	96.925	8:00:00 PM	6.474	1.429	271.118
8:15:00 AM	4.524	1.006	122.378	8:15:00 PM	6.205	1.378	253.178
8:30:00 AM	4.539	0.892	108.626	8:30:00 PM	6.173	1.354	245.58
8:45:00 AM	4.516	0.919	111.464	8:45:00 PM	5.638	1.248	203.095
9:00:00 AM	4.601	0.934	116.187	9:00:00 PM	5.532	1.242	197.136
9:15:00 AM	6.427	1.449	278.605	9:15:00 PM	5.547	1.212	191.465
9:30:00 AM	4.79	1.016	133.415	9:30:00 PM	5.456	1.193	186.072
9:45:00 AM	4.584	0.963	119.18	9:45:00 PM	5.715	1.197	198.248
10:00:00 AM	4.814	1.011	133.685	10:00:00 PM	7.288	1.615	361.935
10:15:00 AM	4.687	0.99	126.302	10:15:00 PM	7.236	1.499	332.907
10:30:00 AM	4.609	0.963	118.964	10:30:00 PM	5.472	1.129	176.793
10:45:00 AM	4.591	0.975	120.689	10:45:00 PM	5.271	1.11	162.535
11:00:00 AM	4.674	1.015	129.005	11:00:00 PM	4.983	1.018	140.085
11:15:00 AM	4.6	0.952	117.884	11:15:00 PM	4.84	0.995	131.318
11:30:00 AM	4.715	1.019	130.973	11:30:00 PM	4.859	1.014	134.454
11:45:00 AM	5.728	1.226	202.769	11:45:00 PM	4.648	0.887	111.635
				Inches	Feet/Sec	GPM	
Daily Avg:				5.091	1.066	158.220	
Daily Min:				3.864	0.667	65.86	
Daily Max:				7.288	1.615	361.935	
Peak to Avg:						2.29	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/4/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Friday - A.M. 8/4/2023

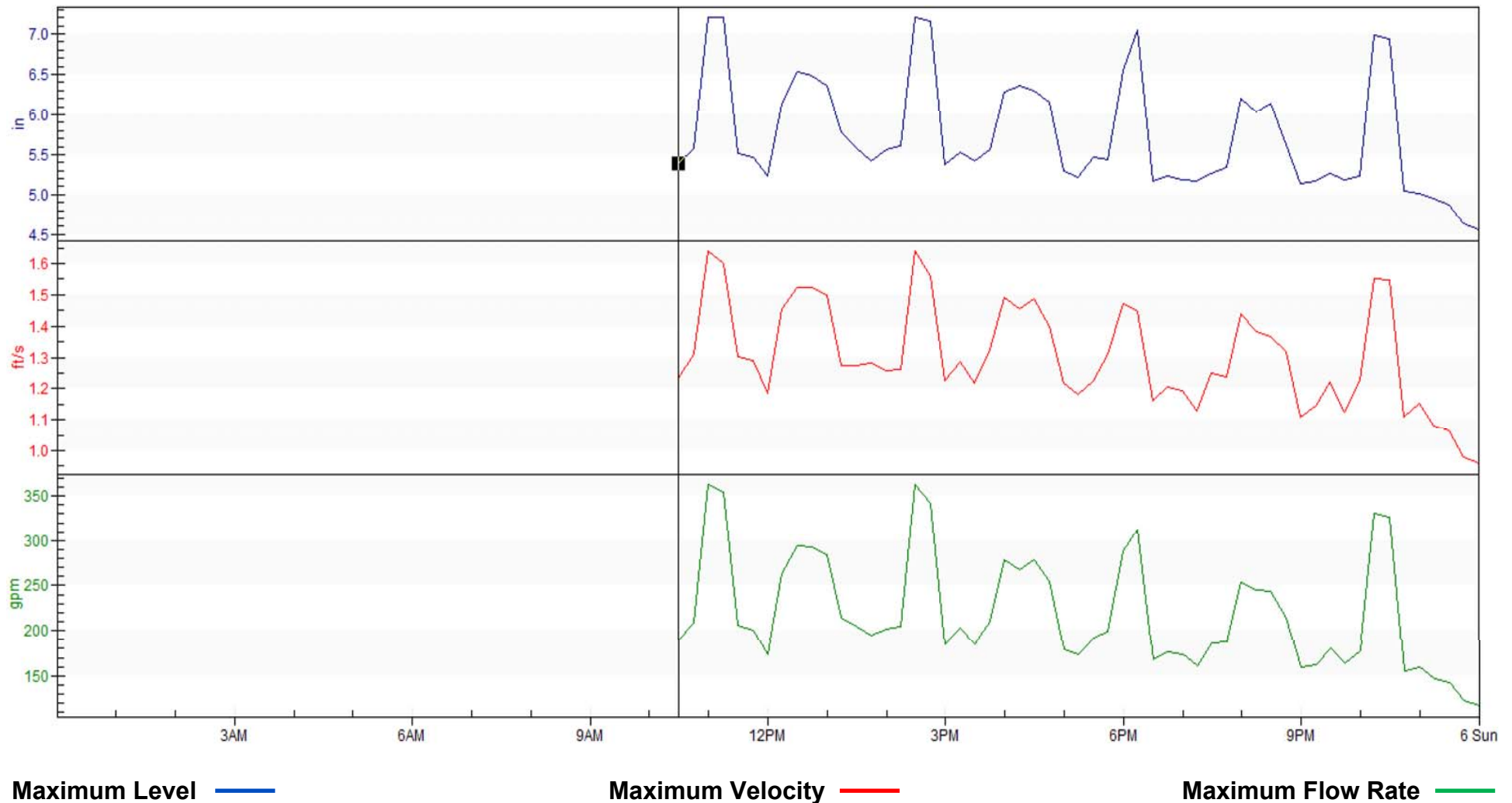
Time	Level	Velocity	Flow
12:00:00 AM	5.548	1.212	193.17
12:15:00 AM	5.5	1.205	186.549
12:30:00 AM	5.351	1.198	182.17
12:45:00 AM	4.131	0.69	71.788
1:00:00 AM	4.215	0.778	85.978
1:15:00 AM	4.018	0.648	66.486
1:30:00 AM	4.004	0.615	63.38
1:45:00 AM	4.13	0.688	73.95
2:00:00 AM	4.141	0.663	71.52
2:15:00 AM	3.973	0.613	61.291
2:30:00 AM	3.904	0.689	68.19
2:45:00 AM	3.954	0.574	58.095
3:00:00 AM	3.832	0.556	53.932
3:15:00 AM	3.897	0.574	56.107
3:30:00 AM	3.903	0.619	61.585
3:45:00 AM	3.916	0.554	54.965
4:00:00 AM	4.098	0.664	70.646
4:15:00 AM	4.223	0.727	79.732
4:30:00 AM	4.486	0.879	105.668
4:45:00 AM	4.607	0.947	118.023
5:00:00 AM	4.665	0.934	118.264
5:15:00 AM	5.279	1.148	171.394
5:30:00 AM	6.672	1.469	295.665
5:45:00 AM	4.536	0.868	105.966
6:00:00 AM	4.481	0.809	97.156
6:15:00 AM	4.386	0.801	93.441
6:30:00 AM	4.326	0.761	86.626
6:45:00 AM	4.197	0.692	76.01
7:00:00 AM	4.261	0.688	77.161
7:15:00 AM	4.338	0.727	83.547
7:30:00 AM	4.192	0.724	77.632
7:45:00 AM	4.135	0.646	68.687
8:00:00 AM	4.302	0.735	83.525
8:15:00 AM	5.404	1.118	172.164
8:30:00 AM	5.524	1.205	190.96
8:45:00 AM	5.472	1.255	196.415
9:00:00 AM	5.319	1.071	161.54
9:15:00 AM	4.639	0.89	110.747
9:30:00 AM	4.701	0.856	109.625
9:45:00 AM	4.704	0.923	118.238
10:00:00 AM	4.678	0.864	108.876
10:15:00 AM	4.738	0.934	120.811
10:30:00 AM	4.799	0.933	122.63
10:45:00 AM	4.958	0.982	135.049
11:00:00 AM	6.569	1.402	267.063
11:15:00 AM	6.47	1.425	276.196
11:30:00 AM	4.904	1.035	137.297
11:45:00 AM	4.869	1.009	132.608

Friday - P.M. 8/4/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.85	0.987	131.746
12:15:00 PM	4.884	1.044	140.678
12:30:00 PM	4.914	1.039	141.125
12:45:00 PM	5.338	1.101	166.876
1:00:00 PM	5.993	1.375	235.609
1:15:00 PM	5.97	1.422	243.594
1:30:00 PM	5.851	1.296	221.187
1:45:00 PM	4.988	1.003	138.74
2:00:00 PM	5.102	1.076	153.671
2:15:00 PM	5.2	1.119	160.851
2:30:00 PM	5.096	1.069	151.36
2:45:00 PM	5.173	1.117	162.379
3:00:00 PM	5.161	1.057	153.28
3:15:00 PM	6.394	1.426	272.34
3:30:00 PM	6.798	1.42	292.611
3:45:00 PM	5.283	1.123	167.834
4:00:00 PM	5.441	1.123	172.309
4:15:00 PM	5.522	1.222	191.745
4:30:00 PM	5.356	1.169	177.92
4:45:00 PM	5.389	1.229	187.984
5:00:00 PM	6.346	1.463	276.815
5:15:00 PM	6.154	1.407	254.296
5:30:00 PM	6.217	1.398	257.643
5:45:00 PM	6.078	1.369	245.231
6:00:00 PM	5.233	1.127	166.397
6:15:00 PM	5.12	1.106	158.693
6:30:00 PM	5.163	1.158	167.909
6:45:00 PM	5.117	1.076	154.23
7:00:00 PM	5.302	1.158	173.901
7:15:00 PM	5.175	1.148	163.258
7:30:00 PM	6.988	1.614	337.636
7:45:00 PM	6.107	1.328	239.408
8:00:00 PM	5.127	1.091	156.721
8:15:00 PM	5.13	1.056	150.949
8:30:00 PM	5.305	1.105	163.037
8:45:00 PM	5.41	1.189	179.912
9:00:00 PM	6.187	1.383	253.495
9:15:00 PM	6.289	1.48	276.836
9:30:00 PM	6.197	1.414	259.694
9:45:00 PM	6.038	1.402	249.009
10:00:00 PM	5.338	1.165	173.216
10:15:00 PM	5.248	1.154	170.675
10:30:00 PM	5.093	1.162	164.584
10:45:00 PM	5.039	1.092	153.337
11:00:00 PM			
11:15:00 PM			
11:30:00 PM			
11:45:00 PM			

	Inches	Feet/Sec	GPM
Daily Avg:	5.076	1.036	153.803
Daily Min:	3.832	0.554	53.932
Daily Max:	6.988	1.614	337.636
Peak to Avg:			2.20

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/5/2023, 12:00 a.m. - 12:00 p.m.**

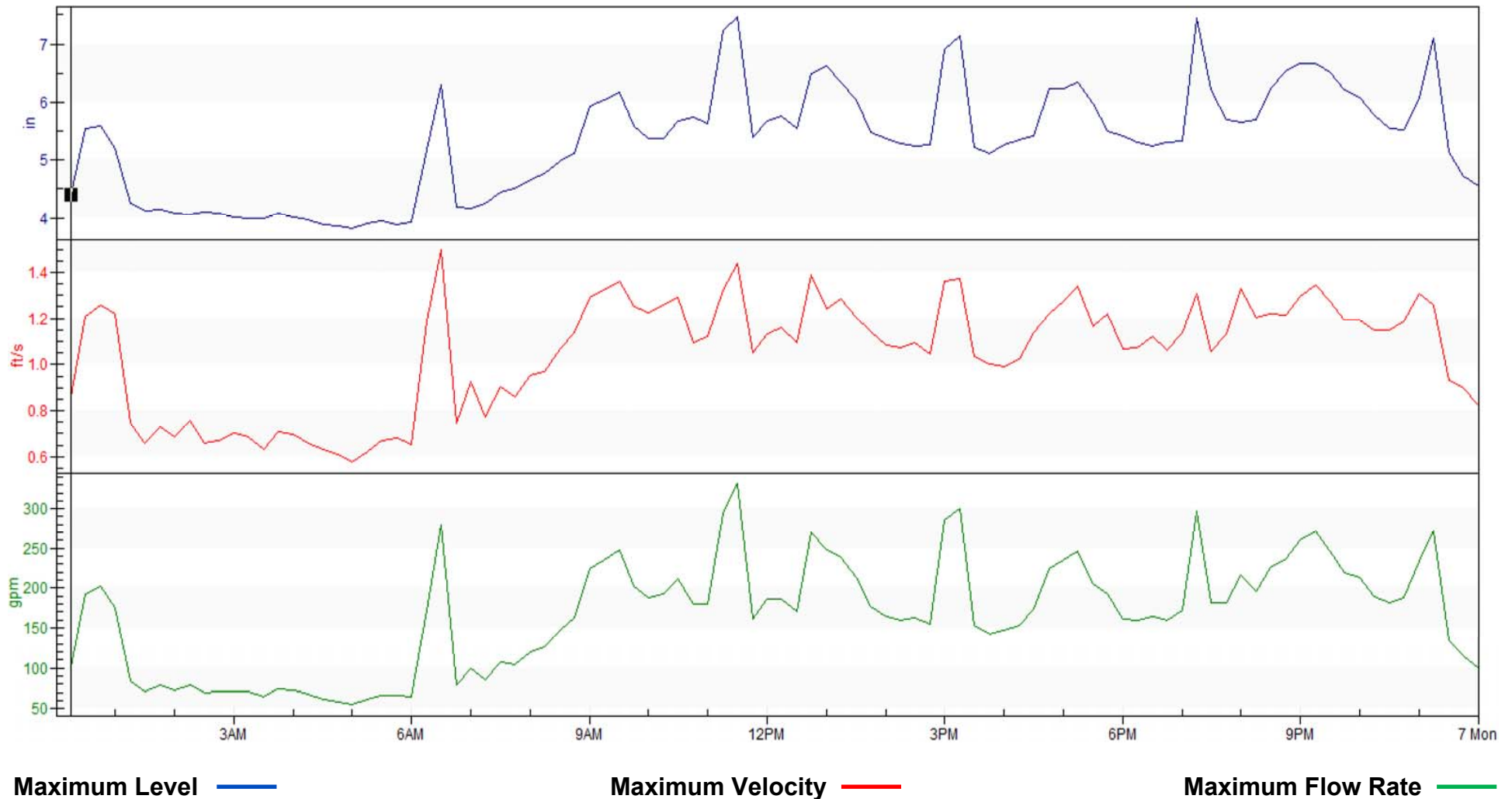
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Saturday - A.M. 8/5/2023

Saturday - P.M. 8/5/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM				12:00:00 PM	5.238	1.184	173.842
12:15:00 AM				12:15:00 PM	6.142	1.454	263.96
12:30:00 AM				12:30:00 PM	6.533	1.523	294.212
12:45:00 AM				12:45:00 PM	6.49	1.525	292.472
1:00:00 AM				1:00:00 PM	6.354	1.499	283.951
1:15:00 AM				1:15:00 PM	5.786	1.274	214.314
1:30:00 AM				1:30:00 PM	5.577	1.274	204.477
1:45:00 AM				1:45:00 PM	5.427	1.283	194.273
2:00:00 AM				2:00:00 PM	5.562	1.259	201.279
2:15:00 AM				2:15:00 PM	5.616	1.261	204.124
2:30:00 AM				2:30:00 PM	7.197	1.641	362.172
2:45:00 AM				2:45:00 PM	7.159	1.558	341.81
3:00:00 AM				3:00:00 PM	5.369	1.224	185.501
3:15:00 AM				3:15:00 PM	5.53	1.285	203.727
3:30:00 AM				3:30:00 PM	5.413	1.218	184.438
3:45:00 AM				3:45:00 PM	5.569	1.326	209.806
4:00:00 AM				4:00:00 PM	6.285	1.49	278.572
4:15:00 AM				4:15:00 PM	6.357	1.456	266.85
4:30:00 AM				4:30:00 PM	6.298	1.486	278.436
4:45:00 AM				4:45:00 PM	6.16	1.4	255.062
5:00:00 AM				5:00:00 PM	5.302	1.217	179.208
5:15:00 AM				5:15:00 PM	5.215	1.179	173.344
5:30:00 AM				5:30:00 PM	5.464	1.226	191.585
5:45:00 AM				5:45:00 PM	5.438	1.31	198.402
6:00:00 AM				6:00:00 PM	6.541	1.471	288.965
6:15:00 AM				6:15:00 PM	7.052	1.448	311.953
6:30:00 AM				6:30:00 PM	5.166	1.161	168.576
6:45:00 AM				6:45:00 PM	5.234	1.206	176.339
7:00:00 AM				7:00:00 PM	5.191	1.192	174.143
7:15:00 AM				7:15:00 PM	5.165	1.13	161.369
7:30:00 AM				7:30:00 PM	5.261	1.249	185.684
7:45:00 AM				7:45:00 PM	5.347	1.236	187.69
8:00:00 AM				8:00:00 PM	6.202	1.44	253.292
8:15:00 AM				8:15:00 PM	6.037	1.384	245.594
8:30:00 AM				8:30:00 PM	6.146	1.365	243.056
8:45:00 AM				8:45:00 PM	5.621	1.319	213.741
9:00:00 AM				9:00:00 PM	5.142	1.11	160.131
9:15:00 AM				9:15:00 PM	5.173	1.146	161.898
9:30:00 AM				9:30:00 PM	5.263	1.222	180.971
9:45:00 AM				9:45:00 PM	5.183	1.126	164.173
10:00:00 AM				10:00:00 PM	5.231	1.227	178.036
10:15:00 AM				10:15:00 PM	6.99	1.551	330.436
10:30:00 AM	5.396	1.234	189.631	10:30:00 PM	6.935	1.547	326.572
10:45:00 AM	5.582	1.309	208.148	10:45:00 PM	5.04	1.11	155.909
11:00:00 AM	7.205	1.64	362.452	11:00:00 PM	5.02	1.152	159.779
11:15:00 AM	7.199	1.602	353.679	11:15:00 PM	4.953	1.081	147.366
11:30:00 AM	5.519	1.303	206.153	11:30:00 PM	4.88	1.063	143.034
11:45:00 AM	5.461	1.289	200.514	11:45:00 PM	4.64	0.98	122.604
				Inches	Feet/Sec	GPM	
				Daily Avg:	5.764	1.312	222.180
				Daily Min:	4.64	0.98	122.604
				Daily Max:	7.205	1.641	362.452
				Peak to Avg:			1.63

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/6/2023, 12:00 a.m. - 12:00 p.m.**

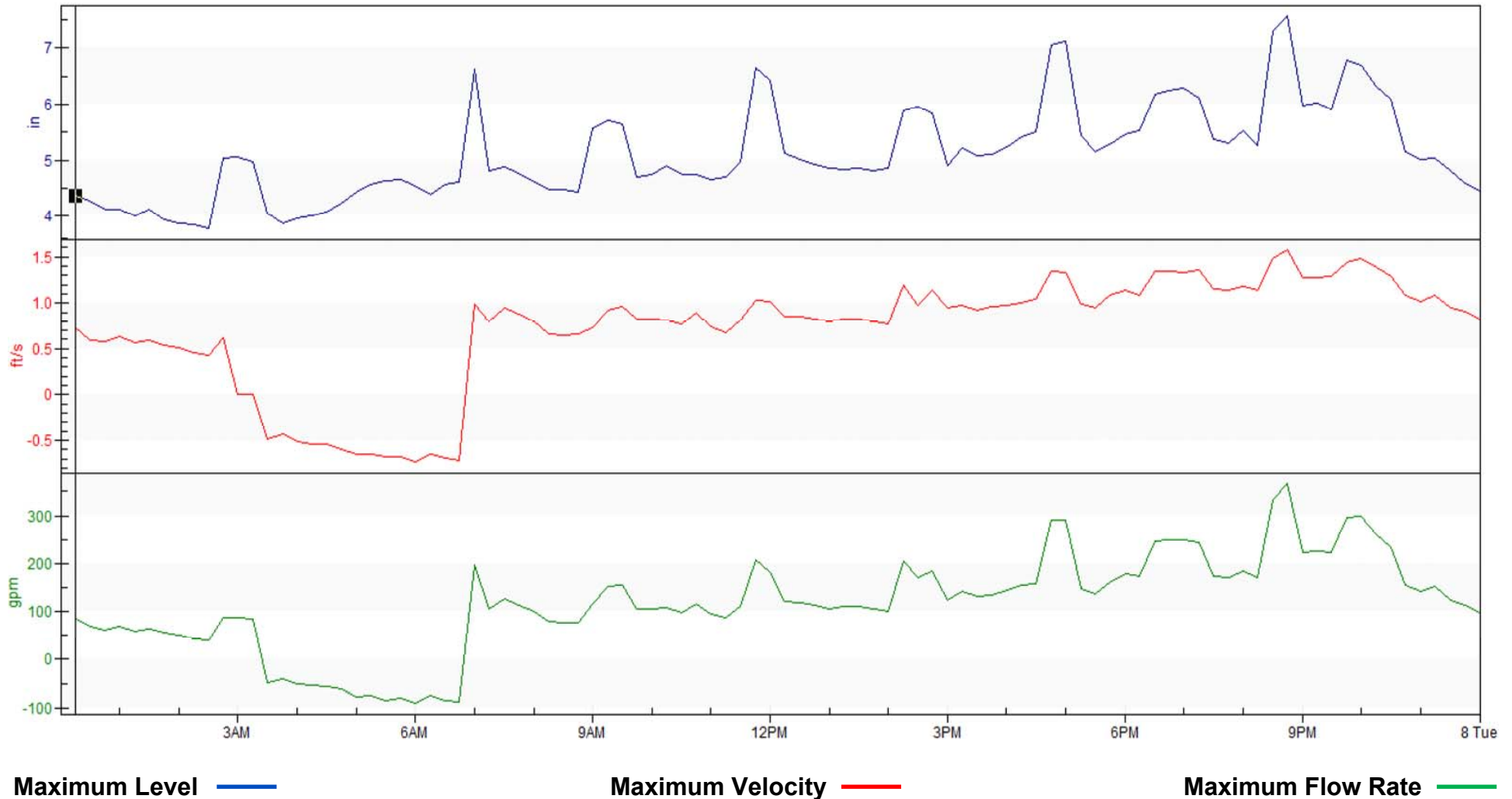
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Sunday - A.M. 8/6/2023

Sunday - P.M. 8/6/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	4.559	0.96	117.917	12:00:00 PM	5.685	1.135	186.692
12:15:00 AM	4.408	0.862	101.228	12:15:00 PM	5.762	1.159	187.215
12:30:00 AM	5.543	1.211	192.797	12:30:00 PM	5.55	1.096	171.262
12:45:00 AM	5.579	1.257	201.752	12:45:00 PM	6.494	1.388	270.184
1:00:00 AM	5.211	1.22	176.055	1:00:00 PM	6.621	1.242	247.793
1:15:00 AM	4.258	0.746	83.595	1:15:00 PM	6.353	1.285	237.94
1:30:00 AM	4.114	0.661	70.658	1:30:00 PM	6.033	1.201	213.175
1:45:00 AM	4.142	0.73	78.775	1:45:00 PM	5.49	1.141	177.348
2:00:00 AM	4.068	0.685	71.972	2:00:00 PM	5.374	1.085	163.679
2:15:00 AM	4.046	0.758	79.18	2:15:00 PM	5.284	1.07	159.257
2:30:00 AM	4.1	0.657	69.873	2:30:00 PM	5.252	1.093	162.169
2:45:00 AM	4.078	0.67	70.766	2:45:00 PM	5.263	1.043	155.224
3:00:00 AM	4.005	0.702	71.301	3:00:00 PM	6.898	1.362	285.534
3:15:00 AM	4.002	0.687	70.692	3:15:00 PM	7.144	1.372	300.157
3:30:00 AM	3.998	0.631	64.901	3:30:00 PM	5.231	1.037	152.99
3:45:00 AM	4.07	0.708	74.611	3:45:00 PM	5.118	1.001	141.789
4:00:00 AM	4.007	0.699	72.087	4:00:00 PM	5.255	0.99	146.91
4:15:00 AM	3.969	0.661	67.213	4:15:00 PM	5.352	1.022	153.211
4:30:00 AM	3.89	0.632	61.164	4:30:00 PM	5.415	1.14	174.352
4:45:00 AM	3.854	0.608	58.812	4:45:00 PM	6.235	1.222	224.045
5:00:00 AM	3.818	0.577	55.676	5:00:00 PM	6.234	1.274	235.165
5:15:00 AM	3.903	0.621	61.721	5:15:00 PM	6.354	1.337	246.361
5:30:00 AM	3.942	0.672	66.568	5:30:00 PM	5.989	1.164	204.724
5:45:00 AM	3.877	0.681	67.157	5:45:00 PM	5.5	1.221	192.424
6:00:00 AM	3.921	0.654	65.421	6:00:00 PM	5.411	1.065	161.583
6:15:00 AM	5.172	1.185	172.227	6:15:00 PM	5.315	1.071	159.849
6:30:00 AM	6.296	1.498	280.467	6:30:00 PM	5.239	1.12	164.828
6:45:00 AM	4.183	0.749	78.736	6:45:00 PM	5.303	1.061	159.361
7:00:00 AM	4.174	0.923	99.193	7:00:00 PM	5.322	1.137	171.634
7:15:00 AM	4.243	0.774	84.875	7:15:00 PM	7.439	1.308	297.806
7:30:00 AM	4.444	0.906	107.561	7:30:00 PM	6.207	1.057	181.092
7:45:00 AM	4.51	0.861	103.737	7:45:00 PM	5.689	1.132	182.449
8:00:00 AM	4.662	0.954	120.837	8:00:00 PM	5.657	1.329	217.146
8:15:00 AM	4.767	0.97	125.688	8:15:00 PM	5.707	1.205	196.326
8:30:00 AM	4.975	1.068	147.557	8:30:00 PM	6.245	1.218	225.787
8:45:00 AM	5.109	1.138	162.813	8:45:00 PM	6.55	1.212	237.467
9:00:00 AM	5.93	1.293	224.545	9:00:00 PM	6.673	1.298	260.931
9:15:00 AM	6.04	1.323	235.218	9:15:00 PM	6.669	1.347	271.042
9:30:00 AM	6.178	1.36	248.537	9:30:00 PM	6.526	1.274	246.236
9:45:00 AM	5.591	1.254	201.782	9:45:00 PM	6.218	1.193	219.96
10:00:00 AM	5.379	1.227	187.859	10:00:00 PM	6.08	1.195	214.12
10:15:00 AM	5.374	1.26	192.686	10:15:00 PM	5.792	1.147	190.142
10:30:00 AM	5.673	1.292	212.015	10:30:00 PM	5.551	1.15	182.025
10:45:00 AM	5.741	1.092	180.847	10:45:00 PM	5.528	1.19	188.702
11:00:00 AM	5.633	1.124	179.663	11:00:00 PM	6.066	1.307	233.643
11:15:00 AM	7.234	1.321	293.424	11:15:00 PM	7.105	1.26	272.326
11:30:00 AM	7.468	1.437	331.497	11:30:00 PM	5.136	0.933	134.392
11:45:00 AM	5.402	1.052	161.93	11:45:00 PM	4.718	0.901	115.888
				Inches	Feet/Sec	GPM	
Daily Avg:				5.337	1.055	166.968	
Daily Min:				3.818	0.577	55.676	
Daily Max:				7.468	1.498	331.497	
Peak to Avg:						1.99	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/7/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Monday - A.M. 8/7/2023

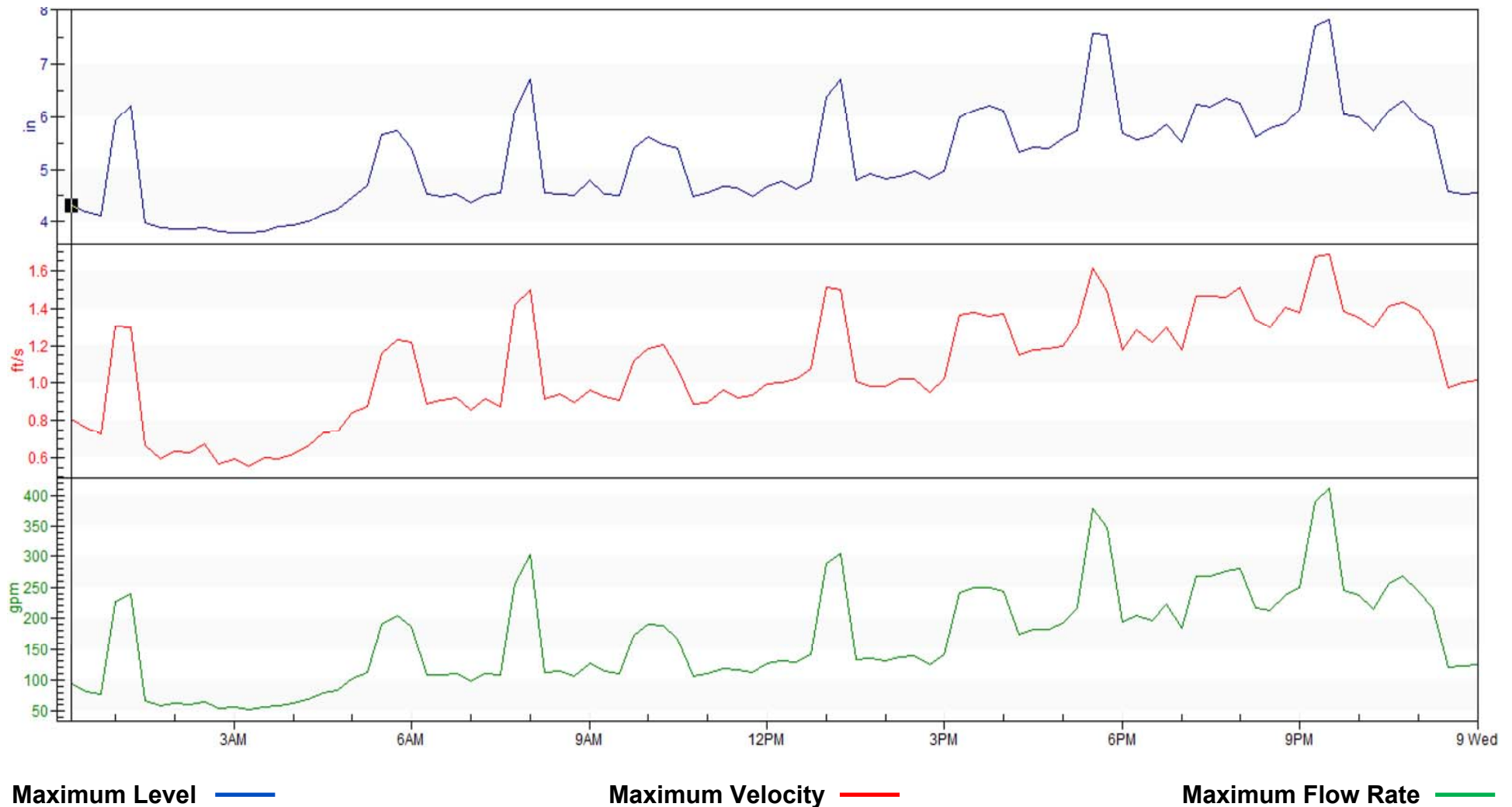
Time	Level	Velocity	Velocity
12:10:00 AM	4.553	0.824	99.718
12:15:00 AM	4.374	0.73	84.852
12:30:00 AM	4.269	0.599	69.352
12:45:00 AM	4.117	0.581	62.066
1:00:00 AM	4.126	0.638	68.473
1:15:00 AM	4.003	0.569	58.565
1:30:00 AM	4.126	0.589	63.185
1:45:00 AM	3.942	0.544	54.811
2:00:00 AM	3.871	0.505	50.479
2:15:00 AM	3.843	0.456	43.287
2:30:00 AM	3.781	0.426	41.146
2:45:00 AM	5.038	0.62	87.094
3:00:00 AM	5.051	0	87.388
3:15:00 AM	4.972	0	85.591
3:30:00 AM	4.058	-0.48	-48.101
3:45:00 AM	3.879	-0.426	-40.866
4:00:00 AM	3.95	-0.519	-51.274
4:15:00 AM	4.008	-0.536	-54.315
4:30:00 AM	4.08	-0.545	-55.624
4:45:00 AM	4.24	-0.593	-62.635
5:00:00 AM	4.434	-0.649	-76.565
5:15:00 AM	4.572	-0.645	-75.293
5:30:00 AM	4.633	-0.679	-83.982
5:45:00 AM	4.645	-0.682	-80.091
6:00:00 AM	4.541	-0.733	-89.652
6:15:00 AM	4.387	-0.652	-75.368
6:30:00 AM	4.577	-0.696	-85.48
6:45:00 AM	4.602	-0.718	-87.505
7:00:00 AM	6.624	0.993	198.086
7:15:00 AM	4.82	0.797	105.606
7:30:00 AM	4.889	0.943	127.298
7:45:00 AM	4.757	0.873	113.64
8:00:00 AM	4.621	0.802	99.604
8:15:00 AM	4.47	0.666	78.604
8:30:00 AM	4.487	0.649	78.018
8:45:00 AM	4.428	0.655	77.419
9:00:00 AM	5.581	0.726	116.606
9:15:00 AM	5.719	0.92	152.505
9:30:00 AM	5.639	0.967	155.49
9:45:00 AM	4.699	0.82	104.918
10:00:00 AM	4.736	0.83	106.404
10:15:00 AM	4.892	0.81	108.322
10:30:00 AM	4.748	0.77	96.777
10:45:00 AM	4.735	0.899	116.203
11:00:00 AM	4.66	0.747	94.098
11:15:00 AM	4.697	0.681	87.142
11:30:00 AM	4.966	0.809	111.505
11:45:00 AM	6.644	1.031	206.542

Monday - P.M. 8/7/2023

Time	Level	Velocity	Flow
12:00:00 PM	6.416	1.013	180.4
12:15:00 PM	5.133	0.848	122.029
12:30:00 PM	5.018	0.852	119.041
12:45:00 PM	4.932	0.829	113.195
1:00:00 PM	4.864	0.791	104.71
1:15:00 PM	4.831	0.824	109.482
1:30:00 PM	4.85	0.823	109.928
1:45:00 PM	4.809	0.801	105.751
2:00:00 PM	4.868	0.766	101.417
2:15:00 PM	5.878	1.195	205.13
2:30:00 PM	5.951	0.98	170.145
2:45:00 PM	5.852	1.138	184.069
3:00:00 PM	4.901	0.942	124.121
3:15:00 PM	5.211	0.976	143.246
3:30:00 PM	5.074	0.924	130.998
3:45:00 PM	5.094	0.964	135.111
4:00:00 PM	5.249	0.974	144.367
4:15:00 PM	5.41	1.003	154.623
4:30:00 PM	5.517	1.037	158.67
4:45:00 PM	7.063	1.347	290.768
5:00:00 PM	7.116	1.338	291.31
5:15:00 PM	5.43	0.983	148.082
5:30:00 PM	5.148	0.942	135.946
5:45:00 PM	5.289	1.079	160.992
6:00:00 PM	5.468	1.143	178.804
6:15:00 PM	5.537	1.088	172.254
6:30:00 PM	6.185	1.345	246.405
6:45:00 PM	6.245	1.344	249.262
7:00:00 PM	6.292	1.326	248.186
7:15:00 PM	6.107	1.357	244.535
7:30:00 PM	5.371	1.151	174.68
7:45:00 PM	5.312	1.137	171.125
8:00:00 PM	5.531	1.185	183.894
8:15:00 PM	5.251	1.146	169.91
8:30:00 PM	7.289	1.481	331.807
8:45:00 PM	7.569	1.578	365.999
9:00:00 PM	5.97	1.279	223.966
9:15:00 PM	6.029	1.27	224.409
9:30:00 PM	5.919	1.289	223.22
9:45:00 PM	6.779	1.442	296.048
10:00:00 PM	6.697	1.481	299.568
10:15:00 PM	6.319	1.381	259.939
10:30:00 PM	6.093	1.296	232.87
10:45:00 PM	5.138	1.084	156.276
11:00:00 PM	5.014	1.012	141.256
11:15:00 PM	5.034	1.085	152.196
11:30:00 PM	4.816	0.946	122.823
11:45:00 PM	4.593	0.912	113.231

	Inches	Feet/Sec	GPM
Daily Avg:	5.130	0.708	116.321
Daily Min:	3.781	-0.733	-89.652
Daily Max:	7.569	1.578	365.999
Peak to Avg:			3.15

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/8/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Tuesday - A.M. 8/8/2023

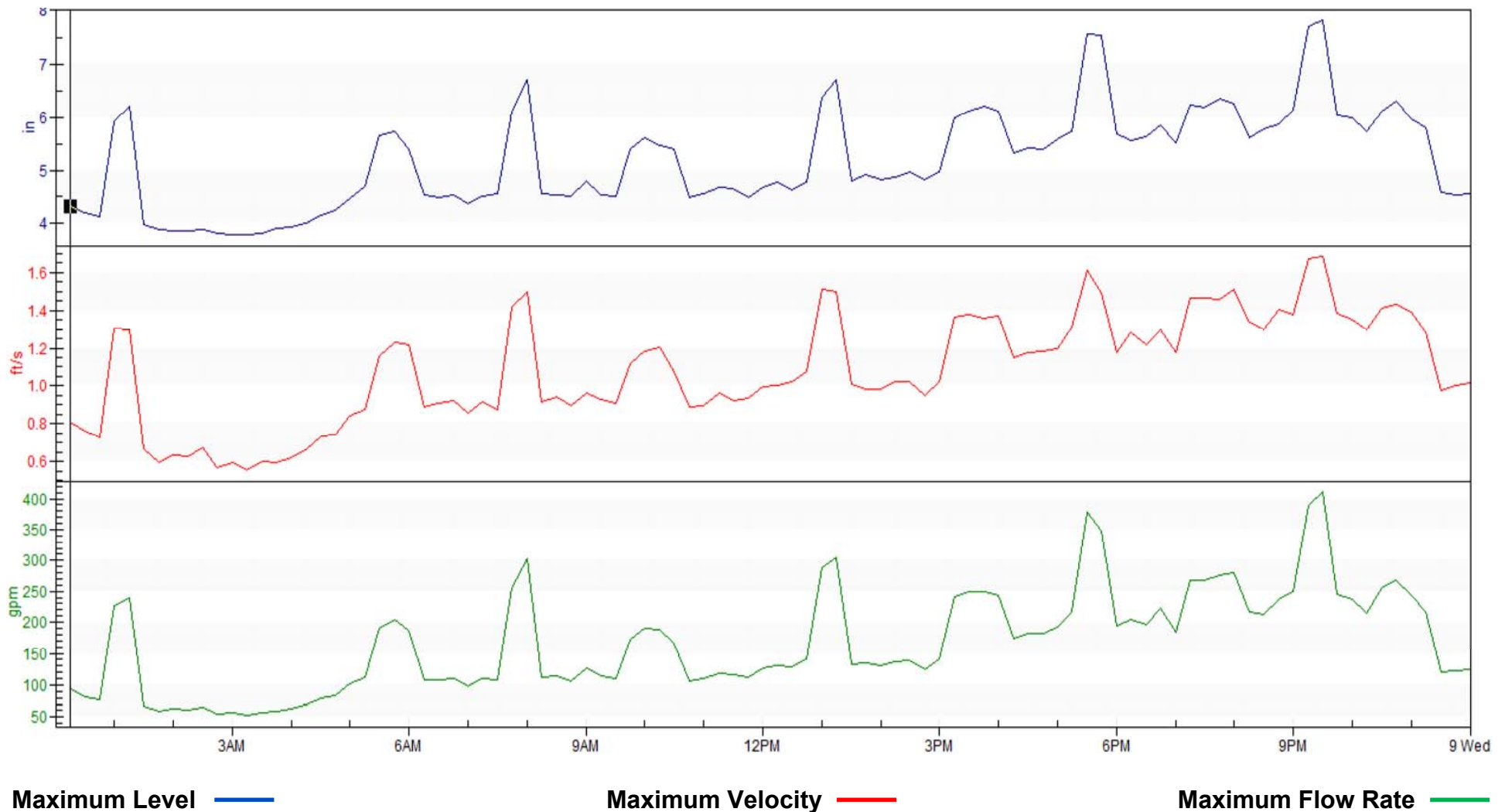
Time	Level	Velocity	Flow
12:00:00 AM	4.451	0.825	97.003
12:15:00 AM	4.328	0.81	92.746
12:30:00 AM	4.199	0.761	81.774
12:45:00 AM	4.117	0.726	77.268
1:00:00 AM	5.925	1.305	226.275
1:15:00 AM	6.21	1.3	239.382
1:30:00 AM	3.984	0.665	67.574
1:45:00 AM	3.889	0.598	59.175
2:00:00 AM	3.876	0.638	62.708
2:15:00 AM	3.857	0.631	61.745
2:30:00 AM	3.883	0.676	65.46
2:45:00 AM	3.819	0.571	55.139
3:00:00 AM	3.792	0.598	57.173
3:15:00 AM	3.802	0.555	53.207
3:30:00 AM	3.817	0.599	57.61
3:45:00 AM	3.901	0.596	59.266
4:00:00 AM	3.93	0.624	62.603
4:15:00 AM	4.014	0.66	68.189
4:30:00 AM	4.155	0.735	78.784
4:45:00 AM	4.246	0.745	82.728
5:00:00 AM	4.468	0.845	100.99
5:15:00 AM	4.702	0.876	112.249
5:30:00 AM	5.666	1.16	189.94
5:45:00 AM	5.724	1.228	203.74
6:00:00 AM	5.385	1.215	186.203
6:15:00 AM	4.532	0.888	108.274
6:30:00 AM	4.491	0.911	108.873
6:45:00 AM	4.531	0.923	110.013
7:00:00 AM	4.376	0.853	97.909
7:15:00 AM	4.504	0.917	110.898
7:30:00 AM	4.559	0.877	107.746
7:45:00 AM	6.113	1.419	256.017
8:00:00 AM	6.712	1.496	303.309
8:15:00 AM	4.554	0.914	112.167
8:30:00 AM	4.533	0.943	114.965
8:45:00 AM	4.516	0.895	106.174
9:00:00 AM	4.802	0.963	126.905
9:15:00 AM	4.537	0.93	113.518
9:30:00 AM	4.503	0.907	109.626
9:45:00 AM	5.389	1.118	171.548
10:00:00 AM	5.613	1.181	189.283
10:15:00 AM	5.465	1.206	187.671
10:30:00 AM	5.397	1.078	165.722
10:45:00 AM	4.479	0.891	105.625
11:00:00 AM	4.546	0.897	109.528
11:15:00 AM	4.668	0.961	118.27
11:30:00 AM	4.659	0.92	115.759
11:45:00 AM	4.479	0.938	112.502

Tuesday - P.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.677	0.995	126.56
12:15:00 PM	4.77	1.002	130.775
12:30:00 PM	4.637	1.023	128.631
12:45:00 PM	4.772	1.074	140.326
1:00:00 PM	6.382	1.513	288.296
1:15:00 PM	6.713	1.498	303.81
1:30:00 PM	4.789	1.008	132.349
1:45:00 PM	4.917	0.985	133.932
2:00:00 PM	4.813	0.982	129.714
2:15:00 PM	4.86	1.024	137.153
2:30:00 PM	4.962	1.024	139.609
2:45:00 PM	4.825	0.951	123.861
3:00:00 PM	4.954	1.022	140.307
3:15:00 PM	6	1.365	240.567
3:30:00 PM	6.118	1.378	248.986
3:45:00 PM	6.216	1.359	249.384
4:00:00 PM	6.105	1.369	244.019
4:15:00 PM	5.322	1.148	173.277
4:30:00 PM	5.416	1.18	182.188
4:45:00 PM	5.397	1.181	181.633
5:00:00 PM	5.589	1.199	192.875
5:15:00 PM	5.718	1.31	217.107
5:30:00 PM	7.579	1.609	377.54
5:45:00 PM	7.554	1.488	347.899
6:00:00 PM	5.68	1.177	193.433
6:15:00 PM	5.555	1.285	205.051
6:30:00 PM	5.622	1.214	195.624
6:45:00 PM	5.849	1.3	221.803
7:00:00 PM	5.512	1.175	184.609
7:15:00 PM	6.223	1.465	268.494
7:30:00 PM	6.186	1.467	268.762
7:45:00 PM	6.352	1.46	276.127
8:00:00 PM	6.252	1.511	280.509
8:15:00 PM	5.614	1.335	215.998
8:30:00 PM	5.769	1.295	213.136
8:45:00 PM	5.871	1.402	237.326
9:00:00 PM	6.127	1.378	249.319
9:15:00 PM	7.713	1.67	387.811
9:30:00 PM	7.834	1.685	410.838
9:45:00 PM	6.042	1.387	246.287
10:00:00 PM	5.988	1.349	237.158
10:15:00 PM	5.727	1.296	215.199
10:30:00 PM	6.112	1.413	255.045
10:45:00 PM	6.306	1.429	268.184
11:00:00 PM	5.97	1.393	243.949
11:15:00 PM	5.81	1.281	216.667
11:30:00 PM	4.59	0.975	120.94
11:45:00 PM	4.537	1.005	122.736

	Inches	Feet/Sec	GPM
Daily Avg:	5.200	1.086	168.527
Daily Min:	3.792	0.555	53.207
Daily Max:	7.834	1.685	410.838
Peak to Avg:			2.44

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7054**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/9/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7054

Tuesday - A.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 AM	4.546	1.014	124.18
12:15:00 AM	4.507	0.936	113.2
12:30:00 AM	4.421	0.878	103.469
12:45:00 AM	4.284	0.819	92.523
1:00:00 AM	4.023	0.715	74.103
1:15:00 AM	3.925	0.698	69.911
1:30:00 AM	3.872	0.751	73.818
1:45:00 AM	3.871	0.643	63.177
2:00:00 AM	3.875	0.72	70.865
2:15:00 AM	4.566	1.047	128.879
2:30:00 AM	6.18	1.383	252.968
2:45:00 AM	3.973	0.824	83.989
3:00:00 AM	3.777	0.695	65.914
3:15:00 AM	3.772	0.763	72.378
3:30:00 AM	3.771	0.701	66.16
3:45:00 AM	3.813	0.77	74.187
4:00:00 AM	3.713	0.669	61.763
4:15:00 AM	3.948	0.788	79.642
4:30:00 AM	4.066	0.867	91.159
4:45:00 AM	4.3	0.954	103.152
5:00:00 AM	4.461	0.994	115.292
5:15:00 AM	4.581	1.022	122.702
5:30:00 AM	4.634	1.051	131.861
5:45:00 AM	4.752	1.139	147.951
6:00:00 AM	5.696	1.324	214.334
6:15:00 AM	5.526	1.255	198.971
6:30:00 AM	5.508	1.227	188.513
6:45:00 AM	4.552	0.994	120.456
7:00:00 AM	4.521	1.026	120.45
7:15:00 AM	4.618	0.985	123.173
7:30:00 AM	4.639	1.081	133.82
7:45:00 AM	4.743	1.04	134.826
8:00:00 AM	4.605	1.047	130.468
8:15:00 AM	4.49	1.053	125.467
8:30:00 AM	4.463	1.062	123.934
8:45:00 AM	6.513	1.481	289.463
9:00:00 AM	6.69	1.592	321.605
9:15:00 AM	4.559	0.993	121.665
9:30:00 AM	4.7	1.038	132.236
9:45:00 AM	4.533	0.98	119.48
10:00:00 AM	5.338	1.198	181.543
10:15:00 AM	4.627	1.089	136.485
10:30:00 AM	4.626	1.037	129.214
10:45:00 AM	4.723	1.049	133.971
11:00:00 AM	4.761	1.027	133.556
11:15:00 AM	5.531	1.234	195.868
11:30:00 AM	5.706	1.317	215.472
11:45:00 AM	5.695	1.243	203.727

Tuesday - P.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 PM	5.622	1.324	214.667
12:15:00 PM	4.961	1.148	158
12:30:00 PM	4.821	1.085	139.67
12:45:00 PM	4.8	1.121	146.015
1:00:00 PM	4.686	0.997	127.17
1:15:00 PM	4.752	1.057	135.249
1:30:00 PM	4.609	1.01	123.994
1:45:00 PM	4.795	1.052	138.331
2:00:00 PM	4.872	1.086	144.442
2:15:00 PM	7.139	1.505	329.052
2:30:00 PM	6.387	1.307	249.26
2:45:00 PM	5.068	1.077	149.74
3:00:00 PM	5.025	1.095	149.515
3:15:00 PM	5.266	1.169	174.112
3:30:00 PM	5.542	1.252	199.313
3:45:00 PM	5.638	1.234	200.381
4:00:00 PM	6.457	1.449	280.126
4:15:00 PM	6.413	1.499	287.371
4:30:00 PM	6.404	1.455	278.398
4:45:00 PM	6.176	1.368	245.359
5:00:00 PM	5.667	1.273	208.481
5:15:00 PM	5.802	1.307	219.02
5:30:00 PM	5.779	1.253	208.332
5:45:00 PM	7.4	1.653	377.046
6:00:00 PM	7.479	1.626	375.68
6:15:00 PM	5.581	1.213	194.837
6:30:00 PM	5.677	1.302	211.652
6:45:00 PM	5.753	1.276	213.109
7:00:00 PM	5.731	1.323	210.337
7:15:00 PM	5.837	1.346	229.083
7:30:00 PM	6.548	1.483	291.739
7:45:00 PM	6.588	1.479	292.695
8:00:00 PM	6.483	1.42	275.149
8:15:00 PM	6.481	1.458	281.509
8:30:00 PM	6.335	1.45	273.619
8:45:00 PM	5.992	1.339	235.568
9:00:00 PM	5.876	1.314	225.469
9:15:00 PM	6.058	1.352	241.265
9:30:00 PM	7.554	1.669	390.162
9:45:00 PM	7.68	1.558	371.151
10:00:00 PM	5.874	1.34	229.893
10:15:00 PM	5.699	1.283	211.708
10:30:00 PM	5.403	1.175	180.889
10:45:00 PM	5.19	1.158	165.908
11:00:00 PM	6.025	1.352	236.628
11:15:00 PM	5.903	1.356	231.573
11:30:00 PM	5.575	1.286	202.412
11:45:00 PM	5.123	1.032	148.197

	Inches	Feet/Sec	GPM
Daily Avg:	5.252	1.153	178.853
Daily Min:	3.713	0.643	61.763
Daily Max:	7.68	1.669	390.162
Peak to Avg:			2.18

Sewer Line Flow Study Summary

Project: City of McFarland, Sewer Flow Study

Location: MH-7054

Pipe Size: 12" VCP

Time Period: 7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.

Level - Inches

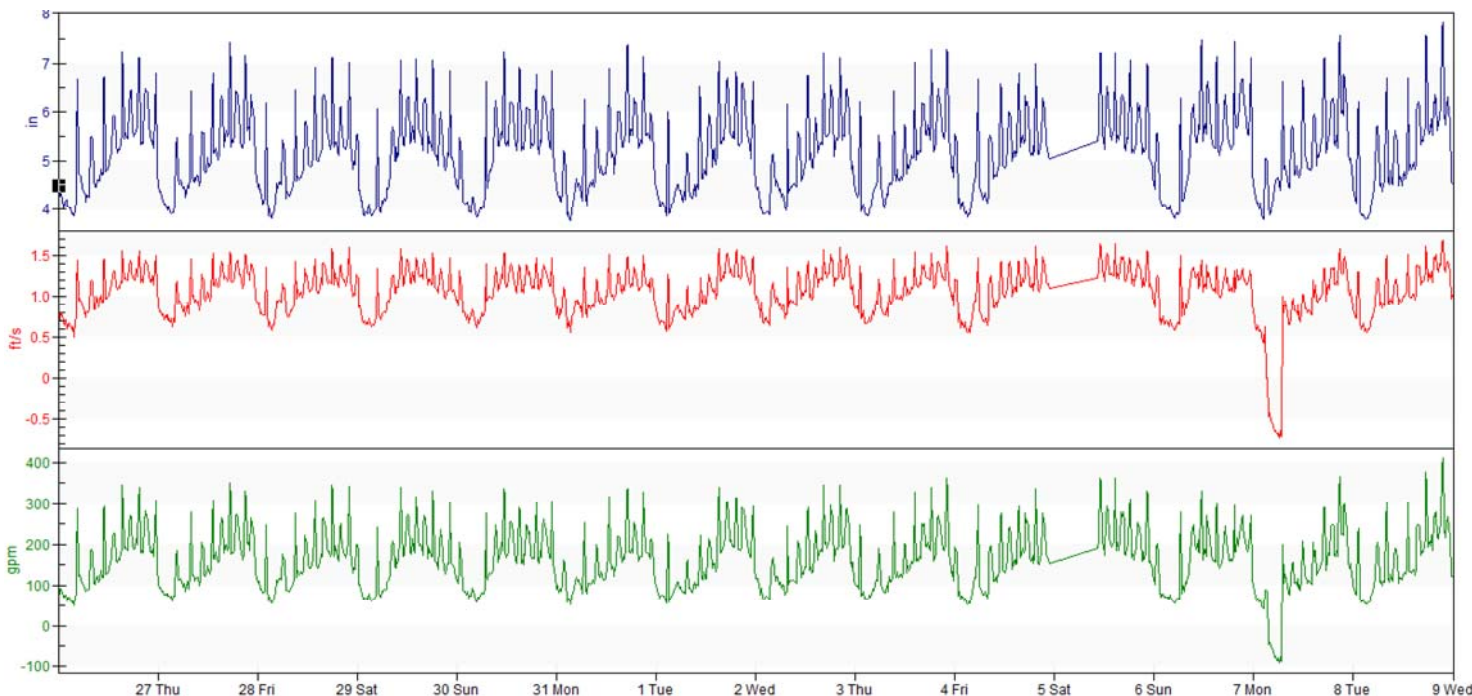
Average:	.....	4.850
Maximum:	.....	7.834
Minimum:	.....	3.726
Max d/D:	.....	65.2%

Velocity - Feet per Second

Average:	.....	0.956
Maximum:	.....	1.685
Minimum:	.....	0.00

Flow Rate - Gallons Per Minute

Average:	.....	141.088
Maximum:	.....	410.838
Minimum:	.....	50.55
Peak to Average	.....	3.15



— Maximum Level

— Maximum Velocity

— Maximum Flow Rate

Sewer Line Daily Totals

Project: **City of McFarland, Sewer Flow Study**

Location: **MH-7054**

Pipe Size: **12" VCP**

Time Period: **7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.**

Daily Totals - US Gallons

Date:	Gallons:
7/26/2023	213,743
7/27/2023	214,554
7/28/2023	210,284
7/29/2023	215,259
7/30/2023	219,811
7/31/2023	199,178
8/0/2023	205,883
8/2/2023	148,507
8/3/2023	210,262
8/4/2023	192,771
8/5/2023	165,355
8/6/2023	218,951
8/7/2023	148,266
8/8/2023	216,167
8/9/2023	233,189
Total Recorded Flow (15 Days)	307,520

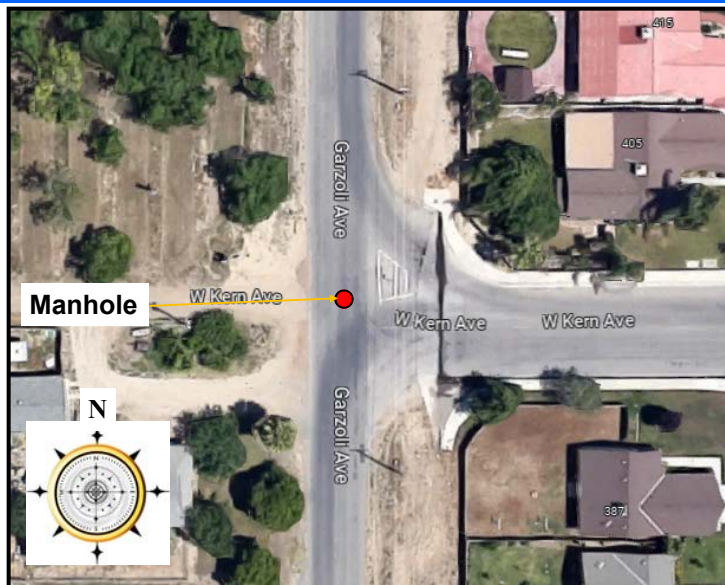
CITY OF MCFARLAND - SEWER FLOW STUDY

MH Location: **MH-7066, Intersection of
Garzoli Ave & W. Kern Ave.
McFarland, CA 93250**

Pipe Size: **21" VCP**

Time Period: **7/26/2023 - 12:00 a.m. to
8/9/2023 - 12:00 a.m.**

GPS: **35.678027, -119.240913**



Manhole - Layout



Equipment

Teledyne Isco 2150 Area Velocity Flow Meter with 10' measuring range:

Level Measurement:

- Method - Submerged pressure transducer mounted in the flow stream
- Transducer Type - Differential linear integrated circuit pressure transducer
- Range (standard) 0.033 to 10 ft (0.010 to 3.05 m); Maximum Allowable Level 34 ft (10.5 m)
- Accuracy ± 0.01 ft from 0.033 to 10 ft, (± 0.003 m from 0.01 to 3.05 m,)
- Long-Term Stability ± 0.023 ft/yr (± 0.007 m/yr)
- Compensated Range 32° to 122°F (0° to 50°C)

Velocity Measurement:

- Method - Doppler ultrasonic, frequency 500 kHz
- Typical Minimum Depth 0.08 ft (25 mm)
- Range -5 to +20 ft/s (-1.5 to +6.1 m/s)
- Accuracy (in water with uniform velocity profile, speed of sound = 4850 ft/s, for indicated velocity range) ± 0.1 ft/s from -5 to 5 ft/s (± 0.03 m/s from— 1.5 to +1.5 m/s)
- $\pm 2\%$ of reading from 5 to 20 ft/s (1.5 to 6.1 m/s)

Method Of Insertion:

- 21 inch line requires confined space entry for installation of ring and transducer.



Gold Coast Environmental

Specializing in process instrumentation and calibration.

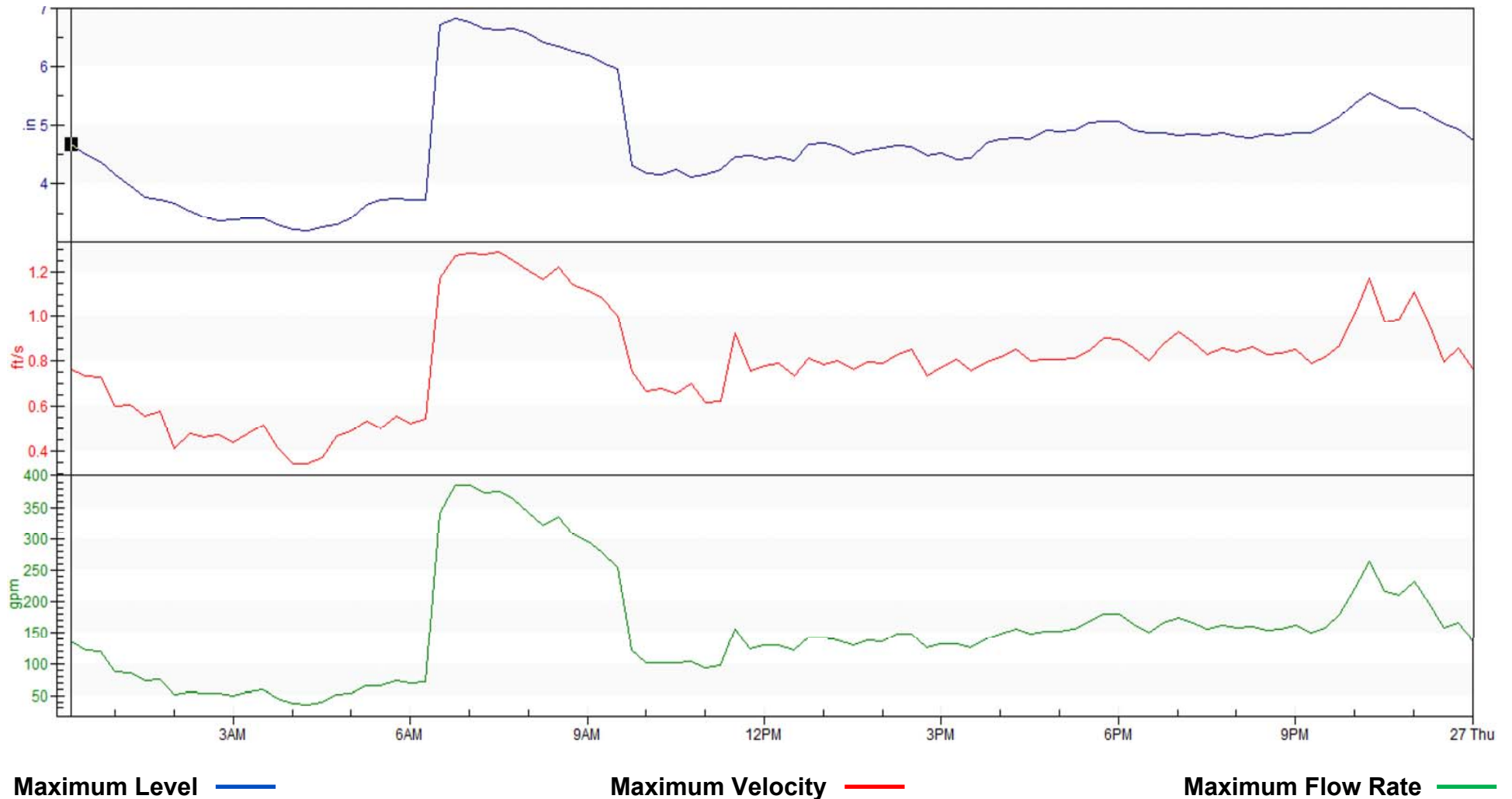


1868 Palma Drive, Suite I, Ventura, CA 93003

www.goldcoastenv.com

805.498.3811 ph.

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/26/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Wednesday - A.M. 7/26/2023

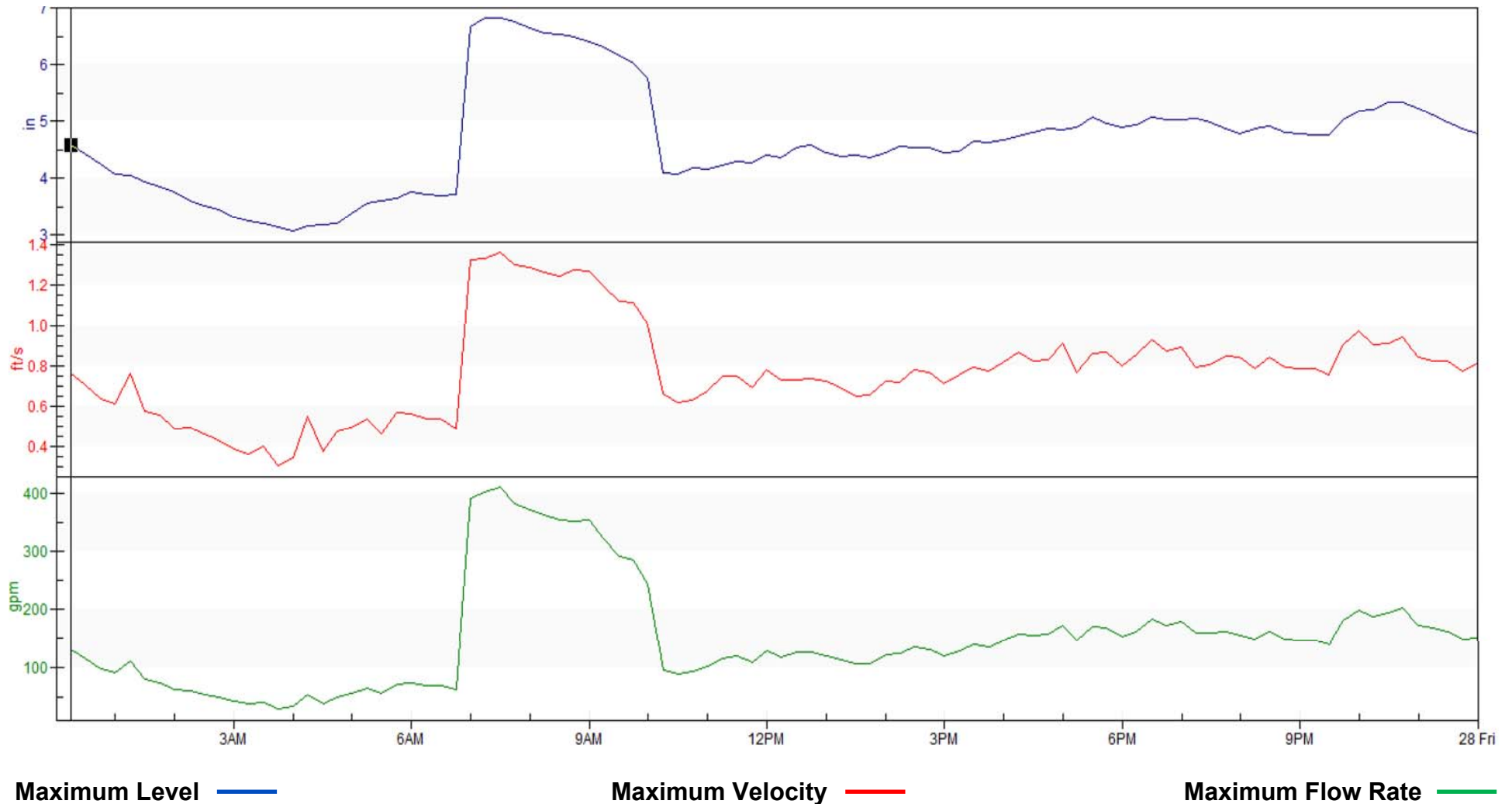
Time	Level	Velocity	Flow
12:15:00 AM	4.668	0.761	136
12:30:00 AM	4.509	0.734	121.267
12:45:00 AM	4.377	0.73	118.969
1:00:00 AM	4.155	0.602	87.317
1:15:00 AM	3.964	0.605	85.663
1:30:00 AM	3.764	0.558	72.616
1:45:00 AM	3.729	0.58	74.399
2:00:00 AM	3.669	0.409	51.736
2:15:00 AM	3.53	0.478	55.615
2:30:00 AM	3.433	0.463	53.295
2:45:00 AM	3.37	0.471	52.767
3:00:00 AM	3.393	0.438	49.251
3:15:00 AM	3.412	0.476	54.16
3:30:00 AM	3.411	0.517	58.327
3:45:00 AM	3.312	0.417	44.968
4:00:00 AM	3.217	0.346	36.238
4:15:00 AM	3.193	0.343	35.442
4:30:00 AM	3.254	0.369	38.408
4:45:00 AM	3.297	0.465	50.059
5:00:00 AM	3.412	0.49	53.823
5:15:00 AM	3.639	0.534	64.372
5:30:00 AM	3.732	0.502	65.152
5:45:00 AM	3.747	0.555	72.35
6:00:00 AM	3.74	0.525	68.129
6:15:00 AM	3.728	0.546	70.664
6:30:00 AM	6.716	1.172	341.746
6:45:00 AM	6.82	1.271	385.762
7:00:00 AM	6.762	1.285	385.851
7:15:00 AM	6.648	1.275	373.994
7:30:00 AM	6.619	1.288	375.458
7:45:00 AM	6.651	1.249	363.267
8:00:00 AM	6.567	1.206	341.765
8:15:00 AM	6.409	1.165	321.413
8:30:00 AM	6.35	1.222	336.606
8:45:00 AM	6.259	1.14	307.726
9:00:00 AM	6.196	1.112	295.88
9:15:00 AM	6.065	1.082	278.772
9:30:00 AM	5.972	1.005	254
9:45:00 AM	4.313	0.756	120.657
10:00:00 AM	4.183	0.666	100.311
10:15:00 AM	4.156	0.679	101.254
10:30:00 AM	4.237	0.656	102.043
10:45:00 AM	4.114	0.7	103.423
11:00:00 AM	4.15	0.616	93.091
11:15:00 AM	4.256	0.621	97.344
11:30:00 AM	4.469	0.922	154.88
11:45:00 AM	4.481	0.754	124.042

Wednesday - P.M. 7/26/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.425	0.778	128.888
12:15:00 PM	4.468	0.789	129.52
12:30:00 PM	4.387	0.737	120.592
12:45:00 PM	4.666	0.81	140.999
1:00:00 PM	4.686	0.783	140.73
1:15:00 PM	4.642	0.804	137.892
1:30:00 PM	4.507	0.76	128.859
1:45:00 PM	4.558	0.797	137.677
2:00:00 PM	4.611	0.789	135.993
2:15:00 PM	4.646	0.832	147.64
2:30:00 PM	4.638	0.853	146.823
2:45:00 PM	4.484	0.737	124.392
3:00:00 PM	4.533	0.772	131.462
3:15:00 PM	4.409	0.804	132.21
3:30:00 PM	4.444	0.756	125.964
3:45:00 PM	4.694	0.794	139.166
4:00:00 PM	4.763	0.816	147.919
4:15:00 PM	4.778	0.852	155.065
4:30:00 PM	4.751	0.799	146.419
4:45:00 PM	4.918	0.808	151.756
5:00:00 PM	4.893	0.808	152.044
5:15:00 PM	4.908	0.813	155.751
5:30:00 PM	5.033	0.845	167.945
5:45:00 PM	5.06	0.903	178.946
6:00:00 PM	5.069	0.898	179.815
6:15:00 PM	4.92	0.86	163.325
6:30:00 PM	4.871	0.8	150.102
6:45:00 PM	4.866	0.872	165.011
7:00:00 PM	4.827	0.928	173.987
7:15:00 PM	4.846	0.883	165.637
7:30:00 PM	4.828	0.829	154.623
7:45:00 PM	4.869	0.859	161.606
8:00:00 PM	4.813	0.84	156.731
8:15:00 PM	4.774	0.863	158.843
8:30:00 PM	4.843	0.83	153.831
8:45:00 PM	4.821	0.837	156.172
9:00:00 PM	4.875	0.854	160.817
9:15:00 PM	4.875	0.791	150.362
9:30:00 PM	5.004	0.818	157.65
9:45:00 PM	5.148	0.87	178.722
10:00:00 PM	5.387	1.016	222.432
10:15:00 PM	5.557	1.17	263.563
10:30:00 PM	5.421	0.974	214.945
10:45:00 PM	5.286	0.984	209.304
11:00:00 PM	5.307	1.107	232.557
11:15:00 PM	5.17	0.97	197.908
11:30:00 PM	5.026	0.796	158.044
11:45:00 PM	4.941	0.858	166.254

	Inches	Feet/Sec	GPM
Daily Avg:	4.698	0.795	154.602
Daily Min:	3.193	0.343	35.442
Daily Max:	6.82	1.288	385.851
Peak to Avg:			2.50

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/27/2023, 12:00 a.m. - 12:00 p.m.**

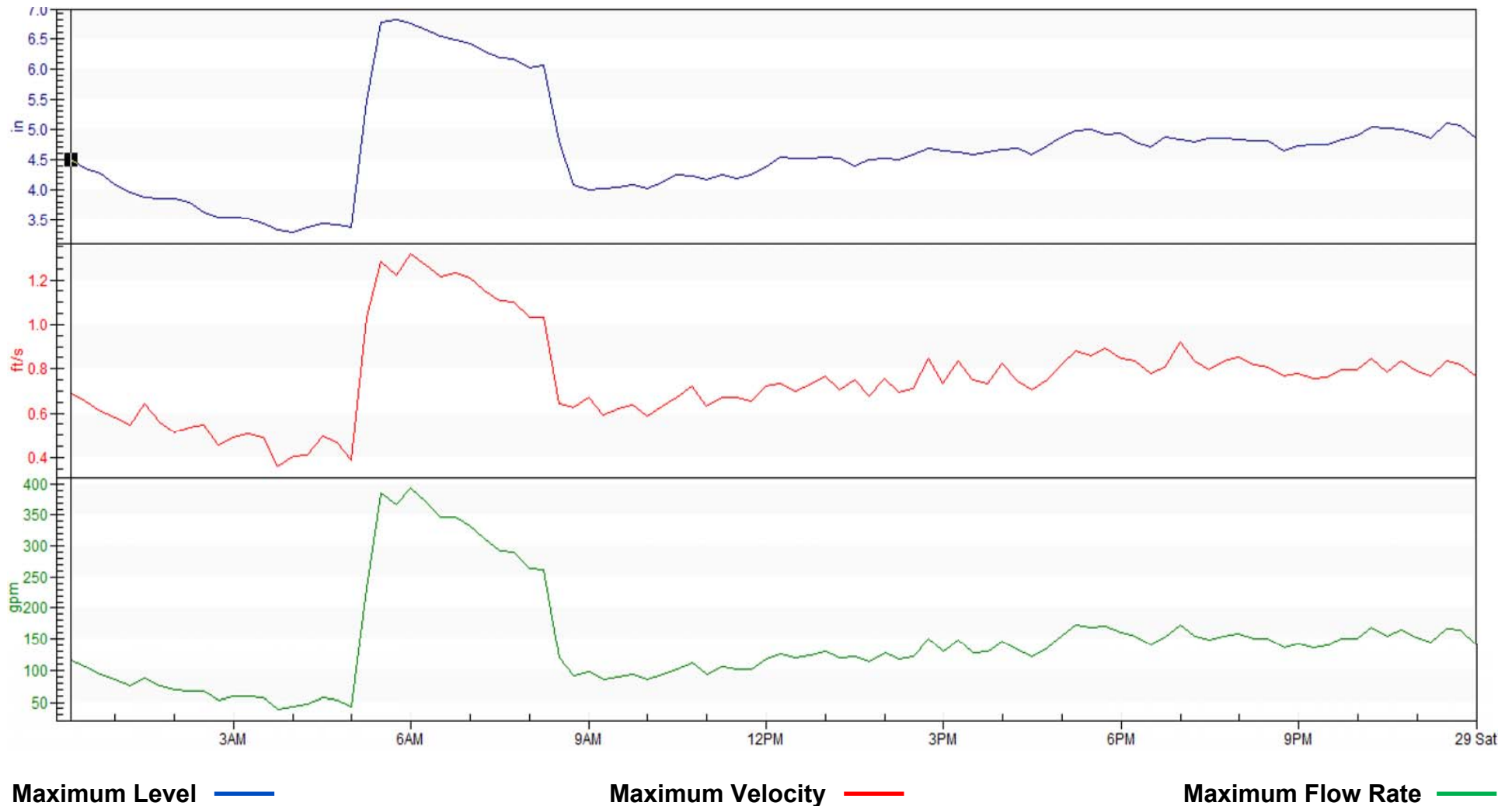
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Thursday - A.M. 7/27/2023

Thursday - P.M. 7/27/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	4.744	0.762	135.225	12:00:00 PM	4.392	0.784	128.516
12:15:00 AM	4.584	0.764	129.834	12:15:00 PM	4.358	0.729	116.786
12:30:00 AM	4.427	0.706	114.869	12:30:00 PM	4.543	0.734	126.149
12:45:00 AM	4.243	0.635	97.919	12:45:00 PM	4.57	0.74	126.504
1:00:00 AM	4.078	0.614	89.938	1:00:00 PM	4.442	0.722	119.541
1:15:00 AM	4.048	0.765	111.48	1:15:00 PM	4.382	0.696	113.644
1:30:00 AM	3.936	0.575	79.184	1:30:00 PM	4.391	0.652	106.809
1:45:00 AM	3.838	0.553	73.461	1:45:00 PM	4.356	0.653	105.666
2:00:00 AM	3.752	0.485	62.566	2:00:00 PM	4.438	0.724	120.404
2:15:00 AM	3.609	0.494	59.914	2:15:00 PM	4.545	0.722	122.971
2:30:00 AM	3.511	0.461	54.335	2:30:00 PM	4.545	0.779	134.079
2:45:00 AM	3.443	0.429	49.5	2:45:00 PM	4.531	0.768	130.768
3:00:00 AM	3.315	0.385	42.081	3:00:00 PM	4.441	0.714	118.823
3:15:00 AM	3.245	0.358	37.947	3:15:00 PM	4.477	0.758	127.69
3:30:00 AM	3.197	0.399	41.426	3:30:00 PM	4.652	0.795	139.476
3:45:00 AM	3.13	0.304	30.326	3:45:00 PM	4.613	0.773	134.452
4:00:00 AM	3.065	0.343	33.153	4:00:00 PM	4.664	0.82	146.124
4:15:00 AM	3.147	0.548	54.113	4:15:00 PM	4.735	0.867	157.327
4:30:00 AM	3.179	0.371	38.139	4:30:00 PM	4.797	0.826	153.399
4:45:00 AM	3.19	0.473	48.894	4:45:00 PM	4.877	0.834	157.245
5:00:00 AM	3.373	0.492	55.211	5:00:00 PM	4.852	0.911	171.959
5:15:00 AM	3.557	0.537	64.941	5:15:00 PM	4.9	0.767	144.979
5:30:00 AM	3.593	0.461	55.58	5:30:00 PM	5.069	0.861	170.069
5:45:00 AM	3.649	0.57	70.446	5:45:00 PM	4.953	0.872	168.102
6:00:00 AM	3.75	0.561	73.296	6:00:00 PM	4.883	0.802	152.8
6:15:00 AM	3.718	0.537	68.867	6:15:00 PM	4.933	0.858	161.553
6:30:00 AM	3.679	0.537	68.115	6:30:00 PM	5.071	0.934	183.541
6:45:00 AM	3.7	0.488	62.566	6:45:00 PM	5.026	0.872	172.011
7:00:00 AM	6.678	1.33	392.583	7:00:00 PM	5.027	0.895	177.668
7:15:00 AM	6.826	1.333	402.417	7:15:00 PM	5.044	0.797	158.52
7:30:00 AM	6.825	1.365	411.067	7:30:00 PM	4.974	0.808	157.943
7:45:00 AM	6.76	1.304	384.211	7:45:00 PM	4.864	0.852	160.315
8:00:00 AM	6.65	1.29	373.195	8:00:00 PM	4.777	0.844	155.169
8:15:00 AM	6.569	1.266	363.919	8:15:00 PM	4.864	0.79	147.232
8:30:00 AM	6.53	1.246	354.732	8:30:00 PM	4.91	0.842	161.72
8:45:00 AM	6.489	1.276	353.219	8:45:00 PM	4.792	0.797	147.731
9:00:00 AM	6.394	1.273	353.859	9:00:00 PM	4.79	0.787	145.496
9:15:00 AM	6.313	1.193	322.368	9:15:00 PM	4.761	0.789	144.921
9:30:00 AM	6.157	1.117	291.715	9:30:00 PM	4.762	0.754	138.677
9:45:00 AM	6.02	1.114	284.813	9:45:00 PM	5.027	0.907	179.968
10:00:00 AM	5.765	1.008	242.522	10:00:00 PM	5.183	0.976	198.78
10:15:00 AM	4.092	0.665	95.322	10:15:00 PM	5.197	0.906	186.191
10:30:00 AM	4.077	0.615	87.974	10:30:00 PM	5.339	0.912	193.166
10:45:00 AM	4.179	0.628	94.042	10:45:00 PM	5.33	0.947	203.042
11:00:00 AM	4.157	0.677	102.595	11:00:00 PM	5.217	0.843	171.932
11:15:00 AM	4.23	0.751	114.27	11:15:00 PM	5.111	0.823	167.205
11:30:00 AM	4.3	0.748	118.975	11:30:00 PM	4.975	0.825	161.363
11:45:00 AM	4.273	0.693	108.1	11:45:00 PM	4.871	0.774	146.855
				Inches	Feet/Sec	GPM	
Daily Avg:				4.647	0.774	149.845	
Daily Min:				3.065	0.304	30.326	
Daily Max:				6.826	1.365	411.067	
Peak to Avg:						2.74	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/28/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Friday - A.M. 7/28/2023

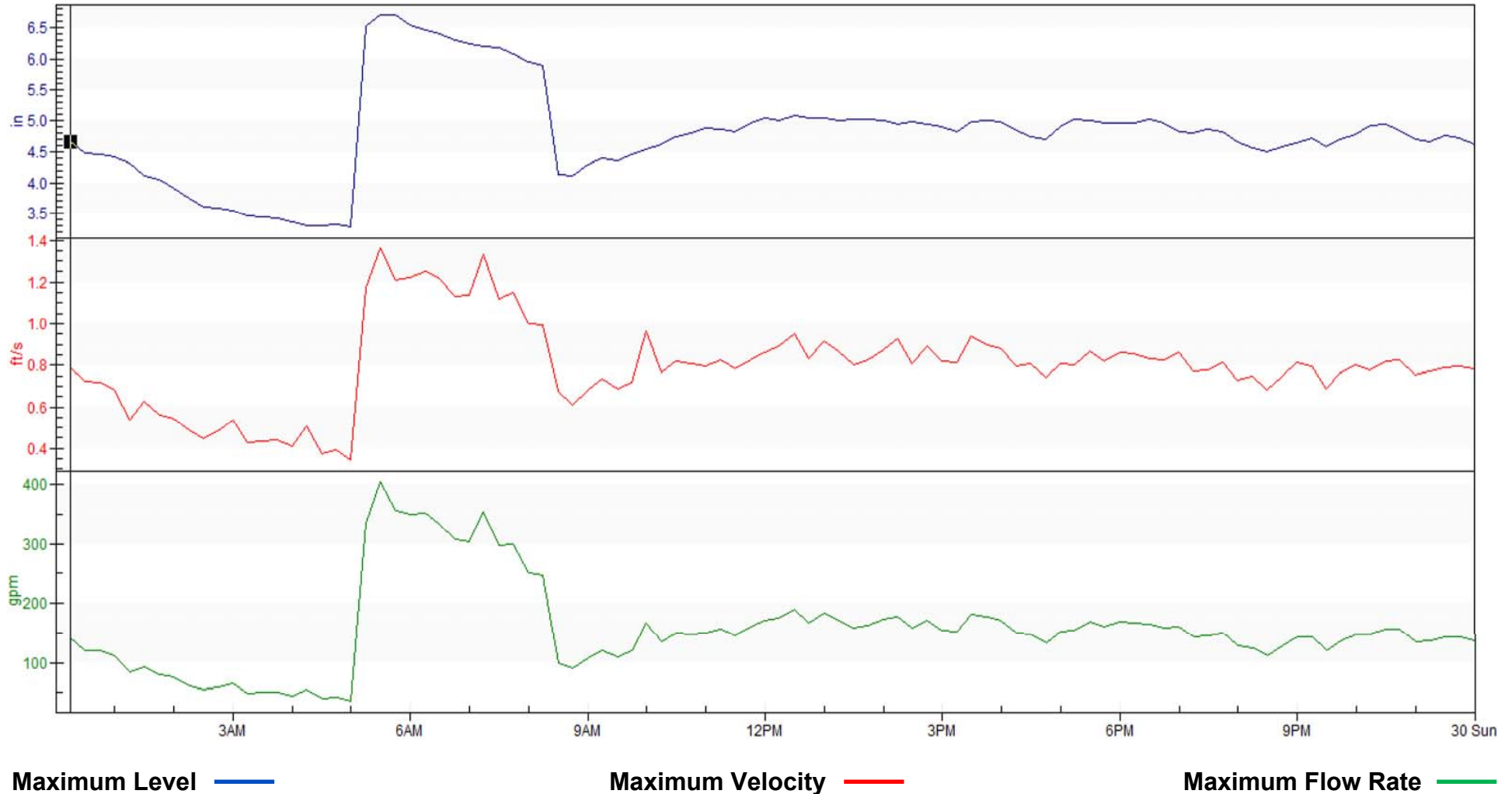
Time	Level	Velocity	Flow
12:00:00 AM	4.789	0.811	150.225
12:15:00 AM	4.5	0.687	116.467
12:30:00 AM	4.353	0.656	105.32
12:45:00 AM	4.273	0.612	94.322
1:00:00 AM	4.077	0.582	85.788
1:15:00 AM	3.95	0.548	75.486
1:30:00 AM	3.884	0.641	86.965
1:45:00 AM	3.849	0.56	75.959
2:00:00 AM	3.846	0.512	69.406
2:15:00 AM	3.8	0.537	67.382
2:30:00 AM	3.622	0.55	67.368
2:45:00 AM	3.542	0.455	53.98
3:00:00 AM	3.551	0.488	58.653
3:15:00 AM	3.517	0.508	58.954
3:30:00 AM	3.439	0.493	56.862
3:45:00 AM	3.335	0.36	39.348
4:00:00 AM	3.294	0.404	43.524
4:15:00 AM	3.374	0.414	46.419
4:30:00 AM	3.43	0.495	56.346
4:45:00 AM	3.426	0.468	53.335
5:00:00 AM	3.376	0.388	43.436
5:15:00 AM	5.485	1.033	231.78
5:30:00 AM	6.768	1.282	385.604
5:45:00 AM	6.805	1.218	366.739
6:00:00 AM	6.735	1.316	393.001
6:15:00 AM	6.64	1.264	370.247
6:30:00 AM	6.536	1.213	347.623
6:45:00 AM	6.47	1.232	347.797
7:00:00 AM	6.416	1.208	333.572
7:15:00 AM	6.288	1.15	312.362
7:30:00 AM	6.183	1.109	292.575
7:45:00 AM	6.15	1.104	290.754
8:00:00 AM	6.017	1.033	263.882
8:15:00 AM	6.064	1.032	262.406
8:30:00 AM	4.814	0.641	119.599
8:45:00 AM	4.087	0.628	91.135
9:00:00 AM	4.008	0.674	96.863
9:15:00 AM	4.031	0.594	84.477
9:30:00 AM	4.034	0.62	89.301
9:45:00 AM	4.075	0.636	92.767
10:00:00 AM	4.019	0.589	85.03
10:15:00 AM	4.134	0.632	92.766
10:30:00 AM	4.246	0.671	102.647
10:45:00 AM	4.23	0.72	111.747
11:00:00 AM	4.158	0.632	93.903
11:15:00 AM	4.254	0.673	104.921
11:30:00 AM	4.194	0.674	102.179
11:45:00 AM	4.24	0.654	101.901

Friday - P.M. 7/28/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.382	0.725	118.347
12:15:00 PM	4.534	0.736	125.478
12:30:00 PM	4.52	0.699	119.379
12:45:00 PM	4.523	0.726	123.525
1:00:00 PM	4.531	0.769	129.634
1:15:00 PM	4.524	0.704	120.284
1:30:00 PM	4.394	0.748	122.668
1:45:00 PM	4.493	0.675	113.697
2:00:00 PM	4.515	0.754	128.383
2:15:00 PM	4.49	0.692	117.055
2:30:00 PM	4.574	0.71	121.199
2:45:00 PM	4.687	0.845	149.729
3:00:00 PM	4.649	0.736	129.558
3:15:00 PM	4.624	0.837	147.65
3:30:00 PM	4.573	0.751	128.166
3:45:00 PM	4.628	0.732	129.226
4:00:00 PM	4.672	0.822	147.163
4:15:00 PM	4.685	0.744	132.979
4:30:00 PM	4.58	0.708	122.455
4:45:00 PM	4.73	0.752	136.912
5:00:00 PM	4.867	0.816	154.68
5:15:00 PM	4.982	0.882	172.852
5:30:00 PM	4.999	0.858	167.636
5:45:00 PM	4.92	0.89	171.431
6:00:00 PM	4.932	0.849	160.103
6:15:00 PM	4.797	0.834	154.961
6:30:00 PM	4.715	0.781	141.06
6:45:00 PM	4.88	0.809	152.61
7:00:00 PM	4.836	0.921	173.128
7:15:00 PM	4.797	0.834	154.377
7:30:00 PM	4.852	0.797	149.29
7:45:00 PM	4.861	0.834	155.159
8:00:00 PM	4.831	0.851	158.303
8:15:00 PM	4.803	0.818	151.017
8:30:00 PM	4.802	0.804	149.665
8:45:00 PM	4.654	0.768	135.829
9:00:00 PM	4.727	0.781	142.085
9:15:00 PM	4.747	0.756	136.942
9:30:00 PM	4.756	0.764	139.719
9:45:00 PM	4.823	0.798	149.462
10:00:00 PM	4.884	0.799	149.593
10:15:00 PM	5.049	0.847	169.13
10:30:00 PM	5.016	0.787	154.833
10:45:00 PM	4.989	0.838	164.563
11:00:00 PM	4.944	0.788	152.767
11:15:00 PM	4.86	0.766	144.993
11:30:00 PM	5.102	0.833	166.677
11:45:00 PM	5.065	0.821	164.684

	Inches	Feet/Sec	GPM
Daily Avg:	4.666	0.762	145.515
Daily Min:	3.294	0.36	39.348
Daily Max:	6.805	1.316	393.001
Peak to Avg:			2.70

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/29/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Saturday - A.M. 7/29/2023

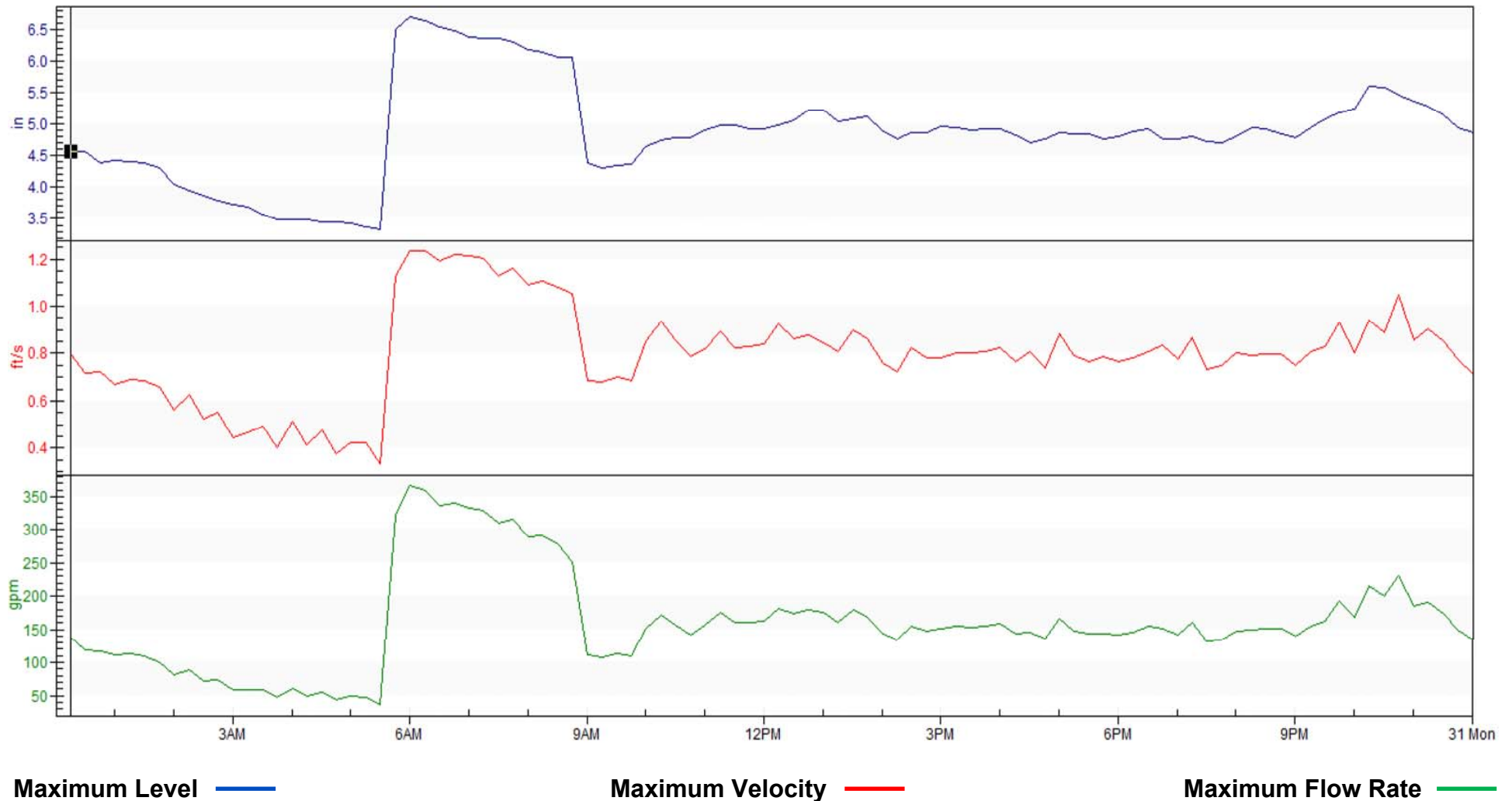
Time	Level	Velocity	Flow
12:00:00 AM	4.86	0.768	139.786
12:15:00 AM	4.65	0.792	140.856
12:30:00 AM	4.485	0.723	120.601
12:45:00 AM	4.452	0.717	119.275
1:00:00 AM	4.407	0.68	111.949
1:15:00 AM	4.306	0.537	84.212
1:30:00 AM	4.115	0.626	92.718
1:45:00 AM	4.056	0.563	80.127
2:00:00 AM	3.916	0.545	75.724
2:15:00 AM	3.746	0.489	62.344
2:30:00 AM	3.596	0.448	54.859
2:45:00 AM	3.587	0.481	58.995
3:00:00 AM	3.55	0.535	64.532
3:15:00 AM	3.47	0.426	49.287
3:30:00 AM	3.452	0.435	50.407
3:45:00 AM	3.427	0.438	50.01
4:00:00 AM	3.356	0.41	45.274
4:15:00 AM	3.3	0.504	54.389
4:30:00 AM	3.306	0.376	40.929
4:45:00 AM	3.328	0.391	42.593
5:00:00 AM	3.281	0.344	36.562
5:15:00 AM	6.518	1.175	335.458
5:30:00 AM	6.703	1.361	404.026
5:45:00 AM	6.696	1.213	356.701
6:00:00 AM	6.542	1.224	349.441
6:15:00 AM	6.469	1.25	351.885
6:30:00 AM	6.408	1.214	333.812
6:45:00 AM	6.291	1.134	308.212
7:00:00 AM	6.231	1.139	303.503
7:15:00 AM	6.195	1.333	354.785
7:30:00 AM	6.171	1.121	296.781
7:45:00 AM	6.078	1.152	298.657
8:00:00 AM	5.949	0.998	250.852
8:15:00 AM	5.885	0.995	246.584
8:30:00 AM	4.131	0.673	100.287
8:45:00 AM	4.113	0.608	89.921
9:00:00 AM	4.293	0.683	108.38
9:15:00 AM	4.39	0.733	119.912
9:30:00 AM	4.344	0.689	109.75
9:45:00 AM	4.465	0.719	120.627
10:00:00 AM	4.542	0.966	165.717
10:15:00 AM	4.619	0.767	134.954
10:30:00 AM	4.748	0.818	149.075
10:45:00 AM	4.803	0.807	147.003
11:00:00 AM	4.88	0.796	149.256
11:15:00 AM	4.858	0.825	155.131
11:30:00 AM	4.821	0.785	146.128
11:45:00 AM	4.964	0.828	159.659

Saturday - P.M. 7/29/2023

Time	Level	Velocity	Flow
12:00:00 PM	5.04	0.859	170.114
12:15:00 PM	5.009	0.889	175.588
12:30:00 PM	5.089	0.952	189.839
12:45:00 PM	5.045	0.83	165.642
1:00:00 PM	5.046	0.917	182.808
1:15:00 PM	5.01	0.867	171.372
1:30:00 PM	5.015	0.804	159.015
1:45:00 PM	5.02	0.824	163.314
2:00:00 PM	5.008	0.872	172.12
2:15:00 PM	4.948	0.926	176.727
2:30:00 PM	4.986	0.811	158.337
2:45:00 PM	4.944	0.89	169.821
3:00:00 PM	4.91	0.818	154.028
3:15:00 PM	4.824	0.812	152.048
3:30:00 PM	4.986	0.937	181.718
3:45:00 PM	5.009	0.899	177.268
4:00:00 PM	4.976	0.878	171.791
4:15:00 PM	4.837	0.798	150.003
4:30:00 PM	4.74	0.808	147.603
4:45:00 PM	4.695	0.742	133.711
5:00:00 PM	4.895	0.81	152.549
5:15:00 PM	5.021	0.802	154.411
5:30:00 PM	5.002	0.867	168.131
5:45:00 PM	4.962	0.82	159.346
6:00:00 PM	4.968	0.863	168.451
6:15:00 PM	4.97	0.858	167.595
6:30:00 PM	5.016	0.83	163.836
6:45:00 PM	4.961	0.824	157.607
7:00:00 PM	4.828	0.859	160.511
7:15:00 PM	4.798	0.771	143.242
7:30:00 PM	4.851	0.775	146.347
7:45:00 PM	4.818	0.814	150.402
8:00:00 PM	4.648	0.73	129.619
8:15:00 PM	4.56	0.747	125.304
8:30:00 PM	4.491	0.679	112.685
8:45:00 PM	4.577	0.746	129.695
9:00:00 PM	4.634	0.814	143.266
9:15:00 PM	4.724	0.794	144.372
9:30:00 PM	4.582	0.688	119.726
9:45:00 PM	4.692	0.765	137.645
10:00:00 PM	4.787	0.801	148.028
10:15:00 PM	4.912	0.78	148.464
10:30:00 PM	4.935	0.818	156.097
10:45:00 PM	4.846	0.827	155.884
11:00:00 PM	4.707	0.753	135.056
11:15:00 PM	4.661	0.774	137.89
11:30:00 PM	4.766	0.789	143.55
11:45:00 PM	4.714	0.795	144.071

	Inches	Feet/Sec	GPM
Daily Avg:	4.793	0.798	156.935
Daily Min:	3.281	0.344	36.562
Daily Max:	6.703	1.361	404.026
Peak to Avg:			2.57

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/30/2023, 12:00 a.m. - 12:00 p.m.**

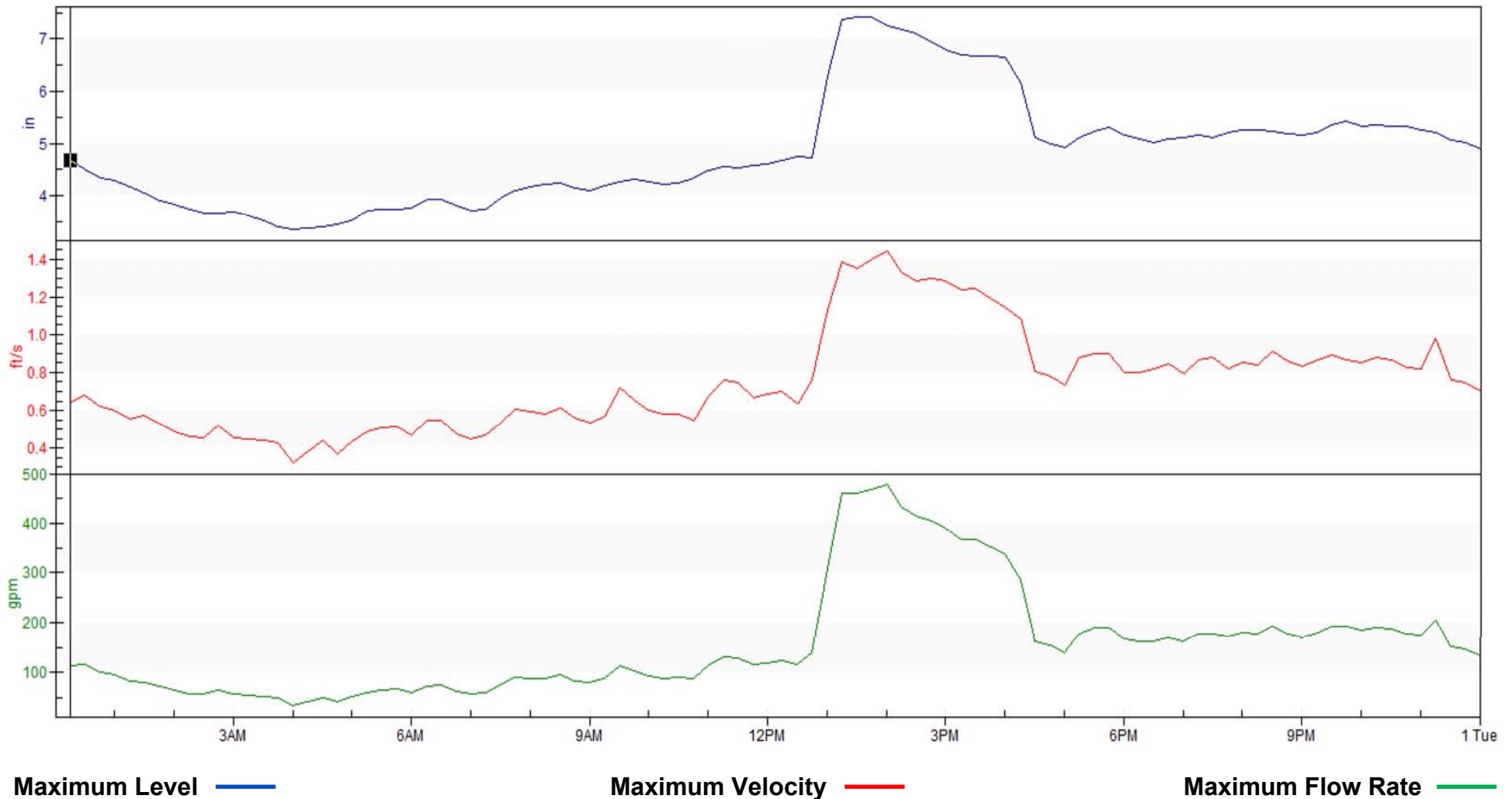
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Sunday - A.M. 7/30/2023

Sunday - P.M. 7/30/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	4.612	0.782	136.389	12:00:00 PM	4.934	0.84	162.474
12:15:00 AM	4.566	0.798	137.686	12:15:00 PM	4.983	0.923	181.03
12:30:00 AM	4.559	0.715	119.585	12:30:00 PM	5.075	0.863	173.618
12:45:00 AM	4.384	0.722	117.941	12:45:00 PM	5.228	0.877	179.442
1:00:00 AM	4.429	0.671	111.107	1:00:00 PM	5.234	0.843	175.193
1:15:00 AM	4.404	0.688	112.487	1:15:00 PM	5.047	0.807	160.335
1:30:00 AM	4.38	0.684	110.463	1:30:00 PM	5.083	0.899	180.002
1:45:00 AM	4.315	0.656	100.829	1:45:00 PM	5.118	0.859	168.412
2:00:00 AM	4.049	0.562	82.027	2:00:00 PM	4.881	0.757	144.134
2:15:00 AM	3.946	0.627	87.953	2:15:00 PM	4.776	0.725	133.752
2:30:00 AM	3.869	0.526	71.297	2:30:00 PM	4.868	0.823	155.777
2:45:00 AM	3.794	0.551	73.229	2:45:00 PM	4.859	0.783	148.074
3:00:00 AM	3.738	0.446	57.784	3:00:00 PM	4.956	0.781	152.022
3:15:00 AM	3.686	0.467	57.692	3:15:00 PM	4.937	0.804	155.604
3:30:00 AM	3.565	0.492	59.202	3:30:00 PM	4.915	0.8	153.807
3:45:00 AM	3.486	0.4	46.991	3:45:00 PM	4.931	0.809	155.497
4:00:00 AM	3.492	0.513	60.385	4:00:00 PM	4.933	0.824	159.361
4:15:00 AM	3.487	0.414	48.16	4:15:00 PM	4.835	0.765	143.674
4:30:00 AM	3.454	0.476	55.004	4:30:00 PM	4.712	0.806	145.273
4:45:00 AM	3.443	0.375	43.28	4:45:00 PM	4.757	0.738	135.154
5:00:00 AM	3.422	0.425	48.368	5:00:00 PM	4.865	0.881	166.921
5:15:00 AM	3.375	0.426	47.755	5:15:00 PM	4.843	0.789	147.672
5:30:00 AM	3.329	0.332	36.256	5:30:00 PM	4.847	0.764	144.108
5:45:00 AM	6.508	1.128	321.51	5:45:00 PM	4.772	0.786	143.718
6:00:00 AM	6.702	1.235	366.332	6:00:00 PM	4.801	0.766	140.983
6:15:00 AM	6.64	1.235	359.408	6:15:00 PM	4.887	0.778	145.215
6:30:00 AM	6.548	1.19	337.013	6:30:00 PM	4.918	0.81	154.287
6:45:00 AM	6.481	1.221	341.046	6:45:00 PM	4.771	0.834	151.565
7:00:00 AM	6.383	1.212	332.584	7:00:00 PM	4.766	0.777	142.537
7:15:00 AM	6.371	1.2	328.842	7:15:00 PM	4.797	0.868	161.302
7:30:00 AM	6.354	1.126	310.284	7:30:00 PM	4.736	0.734	132.942
7:45:00 AM	6.296	1.161	315.871	7:45:00 PM	4.711	0.747	134.74
8:00:00 AM	6.176	1.09	288.868	8:00:00 PM	4.808	0.804	147.081
8:15:00 AM	6.137	1.108	290.993	8:15:00 PM	4.954	0.79	149.461
8:30:00 AM	6.059	1.08	278.118	8:30:00 PM	4.926	0.795	152.044
8:45:00 AM	6.058	1.053	251.404	8:45:00 PM	4.843	0.799	150.424
9:00:00 AM	4.383	0.685	111.943	9:00:00 PM	4.788	0.75	138.965
9:15:00 AM	4.307	0.68	108.275	9:15:00 PM	4.95	0.81	154.714
9:30:00 AM	4.352	0.703	112.732	9:30:00 PM	5.089	0.827	163.418
9:45:00 AM	4.365	0.687	109.856	9:45:00 PM	5.179	0.931	192.368
10:00:00 AM	4.651	0.849	150.905	10:00:00 PM	5.236	0.803	168.823
10:15:00 AM	4.756	0.936	171.662	10:15:00 PM	5.614	0.943	214.573
10:30:00 AM	4.783	0.857	156.272	10:30:00 PM	5.582	0.89	199.524
10:45:00 AM	4.778	0.785	141.864	10:45:00 PM	5.455	1.049	230.773
11:00:00 AM	4.903	0.82	157.073	11:00:00 PM	5.372	0.857	185.748
11:15:00 AM	4.986	0.894	175.463	11:15:00 PM	5.291	0.907	191.654
11:30:00 AM	4.979	0.823	159.842	11:30:00 PM	5.15	0.848	174.253
11:45:00 AM	4.928	0.83	159.73	11:45:00 PM	4.948	0.775	148.67
				Inches	Feet/Sec	GPM	
Daily Avg:				4.874	0.800	160.153	
Daily Min:				3.329	0.332	36.256	
Daily Max:				6.702	1.235	366.332	
Peak to Avg:						2.29	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/31/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Monday - A.M. 7/31/2023

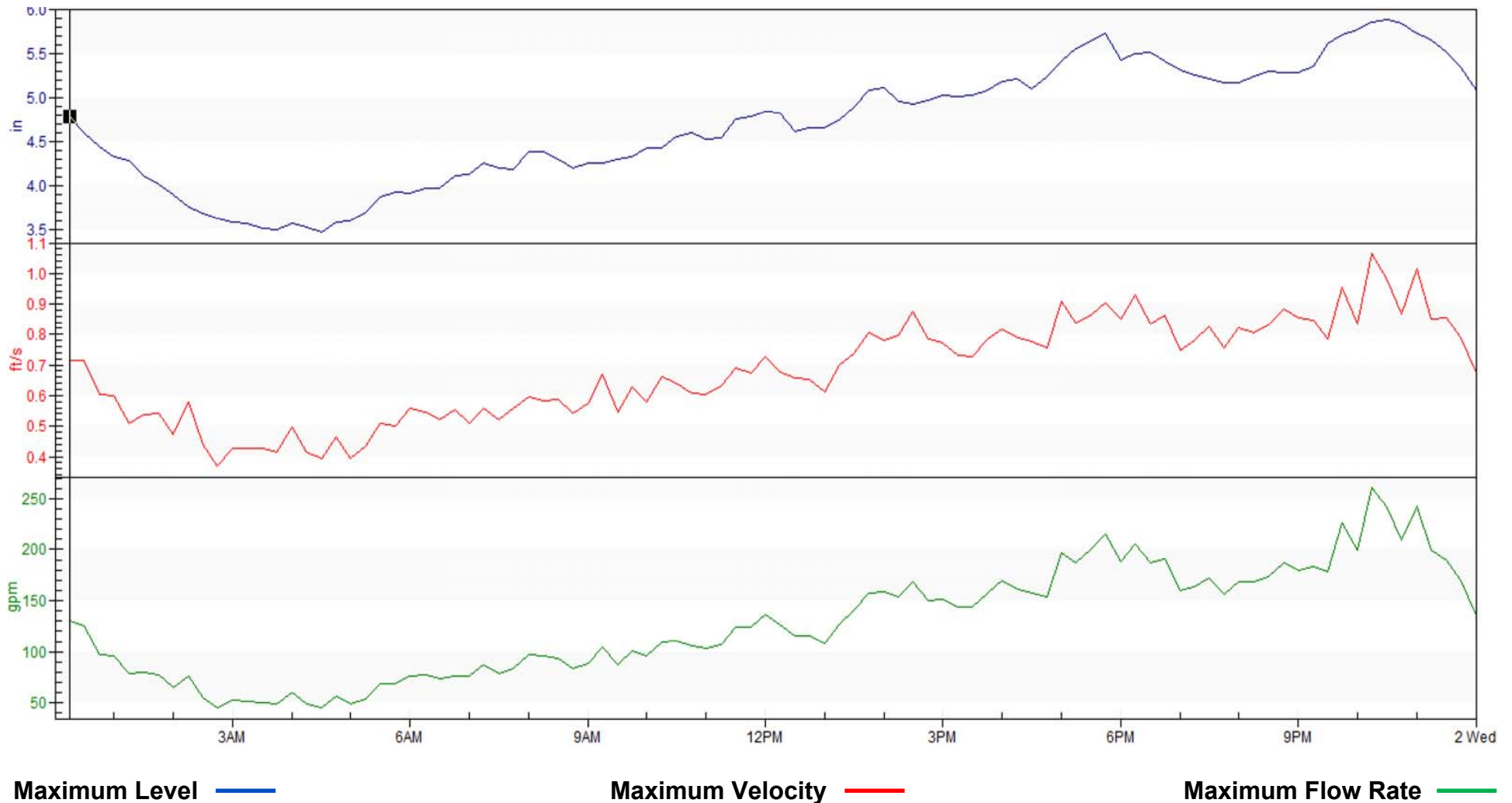
Time	Level	Velocity	Velocity
12:10:00 AM	4.86	0.711	134.582
12:15:00 AM	4.69	0.643	112.248
12:30:00 AM	4.499	0.678	115.055
12:45:00 AM	4.349	0.619	99.997
1:00:00 AM	4.286	0.598	94.679
1:15:00 AM	4.177	0.557	82.538
1:30:00 AM	4.045	0.574	81.259
1:45:00 AM	3.912	0.526	72.133
2:00:00 AM	3.847	0.489	65.587
2:15:00 AM	3.745	0.46	58.532
2:30:00 AM	3.666	0.456	57.672
2:45:00 AM	3.663	0.519	64.893
3:00:00 AM	3.685	0.454	57.808
3:15:00 AM	3.613	0.449	54.792
3:30:00 AM	3.512	0.443	52.622
3:45:00 AM	3.413	0.428	48.807
4:00:00 AM	3.354	0.321	35.413
4:15:00 AM	3.39	0.381	42.433
4:30:00 AM	3.399	0.442	50.156
4:45:00 AM	3.44	0.37	42.077
5:00:00 AM	3.528	0.435	52.079
5:15:00 AM	3.711	0.485	60.84
5:30:00 AM	3.736	0.51	66.207
5:45:00 AM	3.75	0.515	67.226
6:00:00 AM	3.77	0.47	60.838
6:15:00 AM	3.925	0.547	73.942
6:30:00 AM	3.922	0.547	75.601
6:45:00 AM	3.809	0.471	62.918
7:00:00 AM	3.72	0.446	57.601
7:15:00 AM	3.751	0.47	60.999
7:30:00 AM	3.949	0.536	75.467
7:45:00 AM	4.104	0.604	89.838
8:00:00 AM	4.185	0.591	89.182
8:15:00 AM	4.221	0.577	88.47
8:30:00 AM	4.249	0.614	94.623
8:45:00 AM	4.147	0.563	83.801
9:00:00 AM	4.096	0.536	79.172
9:15:00 AM	4.195	0.566	86.874
9:30:00 AM	4.268	0.717	112.791
9:45:00 AM	4.318	0.65	104.031
10:00:00 AM	4.266	0.6	91.977
10:15:00 AM	4.214	0.58	88.101
10:30:00 AM	4.241	0.581	90.626
10:45:00 AM	4.353	0.549	88.787
11:00:00 AM	4.497	0.671	113.638
11:15:00 AM	4.549	0.759	130.765
11:30:00 AM	4.536	0.745	127.739
11:45:00 AM	4.576	0.668	115.424

Monday - P.M. 7/31/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.6	0.687	119.331
12:15:00 PM	4.677	0.697	123.498
12:30:00 PM	4.745	0.636	114.816
12:45:00 PM	4.72	0.762	137.422
1:00:00 PM	6.298	1.135	309.107
1:15:00 PM	7.384	1.382	459.205
1:30:00 PM	7.422	1.349	460.078
1:45:00 PM	7.417	1.4	467.58
2:00:00 PM	7.249	1.445	477.371
2:15:00 PM	7.173	1.331	433.549
2:30:00 PM	7.101	1.287	413.512
2:45:00 PM	6.939	1.296	403.372
3:00:00 PM	6.793	1.285	388.292
3:15:00 PM	6.705	1.237	367.273
3:30:00 PM	6.678	1.245	367.632
3:45:00 PM	6.687	1.194	351.157
4:00:00 PM	6.659	1.144	335.001
4:15:00 PM	6.165	1.083	286.38
4:30:00 PM	5.1	0.809	162.581
4:45:00 PM	5.001	0.777	153.08
5:00:00 PM	4.92	0.731	137.926
5:15:00 PM	5.1	0.876	177.554
5:30:00 PM	5.231	0.902	189.322
5:45:00 PM	5.295	0.896	188.609
6:00:00 PM	5.171	0.802	165.788
6:15:00 PM	5.083	0.8	161.415
6:30:00 PM	5.023	0.821	161.681
6:45:00 PM	5.097	0.846	169.75
7:00:00 PM	5.114	0.793	160.69
7:15:00 PM	5.148	0.865	177.287
7:30:00 PM	5.113	0.879	177.747
7:45:00 PM	5.217	0.82	171.604
8:00:00 PM	5.263	0.854	180.141
8:15:00 PM	5.249	0.84	176.016
8:30:00 PM	5.232	0.914	191.887
8:45:00 PM	5.18	0.857	177.373
9:00:00 PM	5.171	0.831	170.186
9:15:00 PM	5.208	0.863	179.513
9:30:00 PM	5.349	0.891	193.013
9:45:00 PM	5.415	0.869	191.522
10:00:00 PM	5.339	0.855	183.995
10:15:00 PM	5.359	0.876	189.239
10:30:00 PM	5.327	0.864	186.124
10:45:00 PM	5.328	0.828	176.88
11:00:00 PM	5.264	0.82	173.665
11:15:00 PM	5.21	0.98	204.565
11:30:00 PM	5.055	0.757	150.876
11:45:00 PM	5.009	0.745	147.153

	Inches	Feet/Sec	GPM
Daily Avg:	4.824	0.750	157.053
Daily Min:	3.354	0.321	35.413
Daily Max:	7.422	1.445	477.371
Peak to Avg:			3.04

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/1/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Tuesday- A.M. 8/1/2023

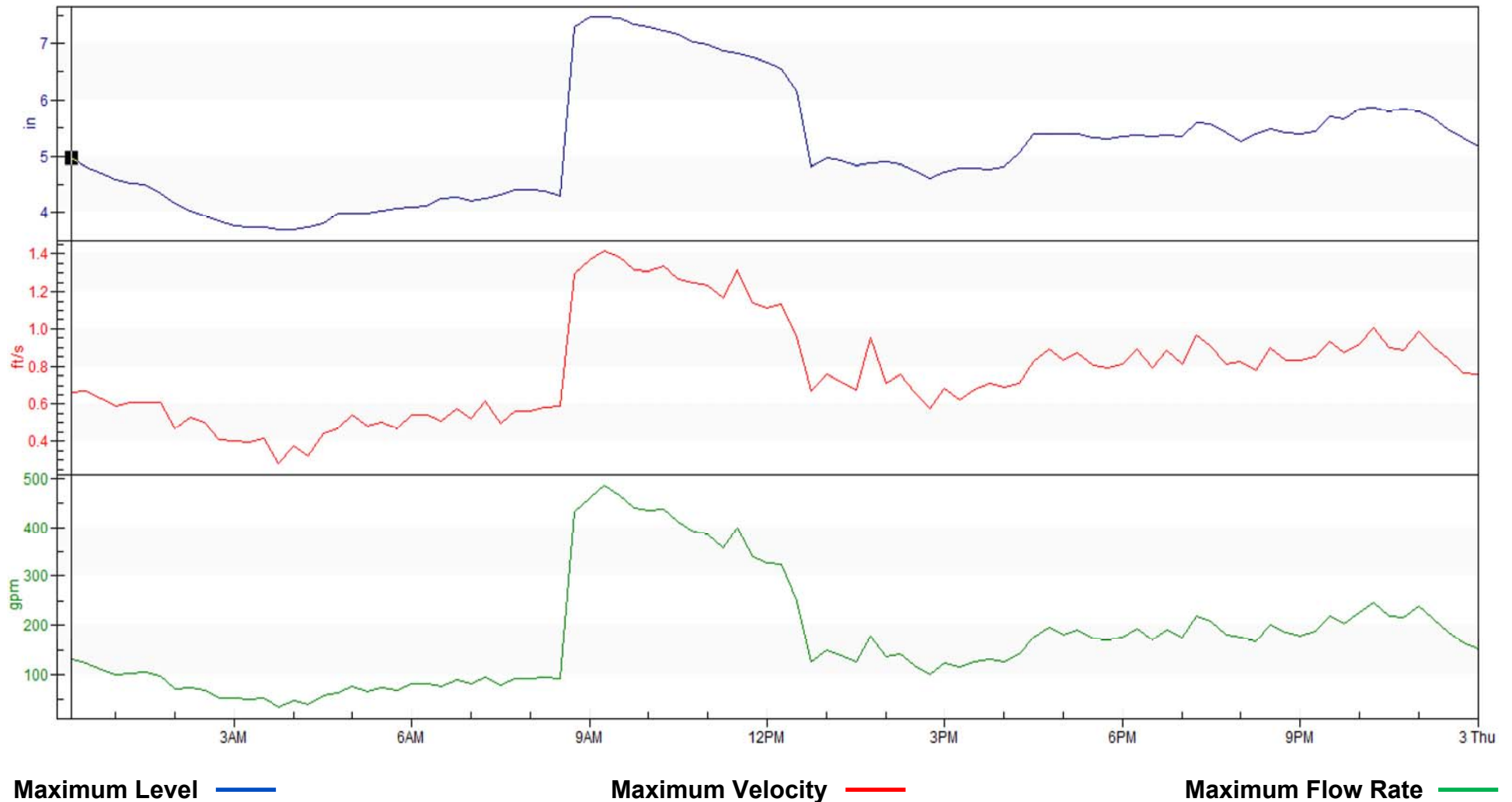
Time	Level	Velocity	Flow
12:00:00 AM	4.897	0.697	133.321
12:15:00 AM	4.78	0.714	130.082
12:30:00 AM	4.595	0.714	124.829
12:45:00 AM	4.437	0.602	97.054
1:00:00 AM	4.323	0.6	96.125
1:15:00 AM	4.287	0.508	78.022
1:30:00 AM	4.117	0.54	79.327
1:45:00 AM	4.009	0.541	77.794
2:00:00 AM	3.896	0.47	64.872
2:15:00 AM	3.754	0.58	75.923
2:30:00 AM	3.678	0.438	55.576
2:45:00 AM	3.625	0.369	45.917
3:00:00 AM	3.578	0.429	52.36
3:15:00 AM	3.574	0.427	51.073
3:30:00 AM	3.512	0.429	50.485
3:45:00 AM	3.499	0.413	48.838
4:00:00 AM	3.575	0.496	60.449
4:15:00 AM	3.52	0.416	49.118
4:30:00 AM	3.469	0.392	45.66
4:45:00 AM	3.586	0.464	56.856
5:00:00 AM	3.601	0.394	48.551
5:15:00 AM	3.695	0.436	54.208
5:30:00 AM	3.864	0.508	69.23
5:45:00 AM	3.929	0.5	68.488
6:00:00 AM	3.908	0.558	76.481
6:15:00 AM	3.973	0.547	77.052
6:30:00 AM	3.969	0.522	73.335
6:45:00 AM	4.11	0.553	76.186
7:00:00 AM	4.127	0.507	76.04
7:15:00 AM	4.251	0.558	87.299
7:30:00 AM	4.194	0.523	78.993
7:45:00 AM	4.189	0.558	84.052
8:00:00 AM	4.38	0.596	97.349
8:15:00 AM	4.39	0.584	95.657
8:30:00 AM	4.297	0.586	92.987
8:45:00 AM	4.192	0.541	82.997
9:00:00 AM	4.255	0.576	89.094
9:15:00 AM	4.26	0.668	104.707
9:30:00 AM	4.302	0.547	86.942
9:45:00 AM	4.327	0.628	100.741
10:00:00 AM	4.433	0.58	95.772
10:15:00 AM	4.434	0.662	109.348
10:30:00 AM	4.555	0.639	110.268
10:45:00 AM	4.594	0.606	105.823
11:00:00 AM	4.534	0.602	103.282
11:15:00 AM	4.536	0.634	107.292
11:30:00 AM	4.754	0.692	123.841
11:45:00 AM	4.778	0.672	123.872

Tuesday- P.M. 8/1/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.836	0.729	135.997
12:15:00 PM	4.834	0.676	127.055
12:30:00 PM	4.62	0.655	115.37
12:45:00 PM	4.655	0.653	115.995
1:00:00 PM	4.657	0.614	108.754
1:15:00 PM	4.738	0.697	127.216
1:30:00 PM	4.896	0.739	141.342
1:45:00 PM	5.085	0.804	157.006
2:00:00 PM	5.116	0.781	158.861
2:15:00 PM	4.961	0.797	154.108
2:30:00 PM	4.922	0.874	167.918
2:45:00 PM	4.968	0.786	150.493
3:00:00 PM	5.033	0.773	151.423
3:15:00 PM	5.011	0.729	143.803
3:30:00 PM	5.029	0.725	144.072
3:45:00 PM	5.085	0.784	156.872
4:00:00 PM	5.192	0.816	169.615
4:15:00 PM	5.206	0.788	161.283
4:30:00 PM	5.095	0.776	156.839
4:45:00 PM	5.244	0.754	153.573
5:00:00 PM	5.414	0.909	196.578
5:15:00 PM	5.552	0.838	187.026
5:30:00 PM	5.64	0.861	201.021
5:45:00 PM	5.726	0.905	215.815
6:00:00 PM	5.43	0.851	188.332
6:15:00 PM	5.503	0.928	205.093
6:30:00 PM	5.517	0.835	186.913
6:45:00 PM	5.409	0.864	190.175
7:00:00 PM	5.314	0.749	159.969
7:15:00 PM	5.261	0.782	164.093
7:30:00 PM	5.212	0.824	172.082
7:45:00 PM	5.175	0.757	155.658
8:00:00 PM	5.164	0.82	168.966
8:15:00 PM	5.241	0.804	168.437
8:30:00 PM	5.296	0.828	173.922
8:45:00 PM	5.286	0.883	187.431
9:00:00 PM	5.287	0.853	179.717
9:15:00 PM	5.353	0.846	183.443
9:30:00 PM	5.607	0.786	178.31
9:45:00 PM	5.717	0.955	226.164
10:00:00 PM	5.778	0.834	199.887
10:15:00 PM	5.852	1.064	260.618
10:30:00 PM	5.886	0.976	241.742
10:45:00 PM	5.846	0.868	209.383
11:00:00 PM	5.728	1.015	242.204
11:15:00 PM	5.652	0.851	199.357
11:30:00 PM	5.508	0.853	189.052
11:45:00 PM	5.341	0.787	170.232

	Inches	Feet/Sec	GPM
Daily Avg:	4.690	0.680	127.784
Daily Min:	3.469	0.369	45.66
Daily Max:	5.886	1.064	260.618
Peak to Avg:			2.04

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/2/2023, 12:00 a.m. - 12:00 p.m.**

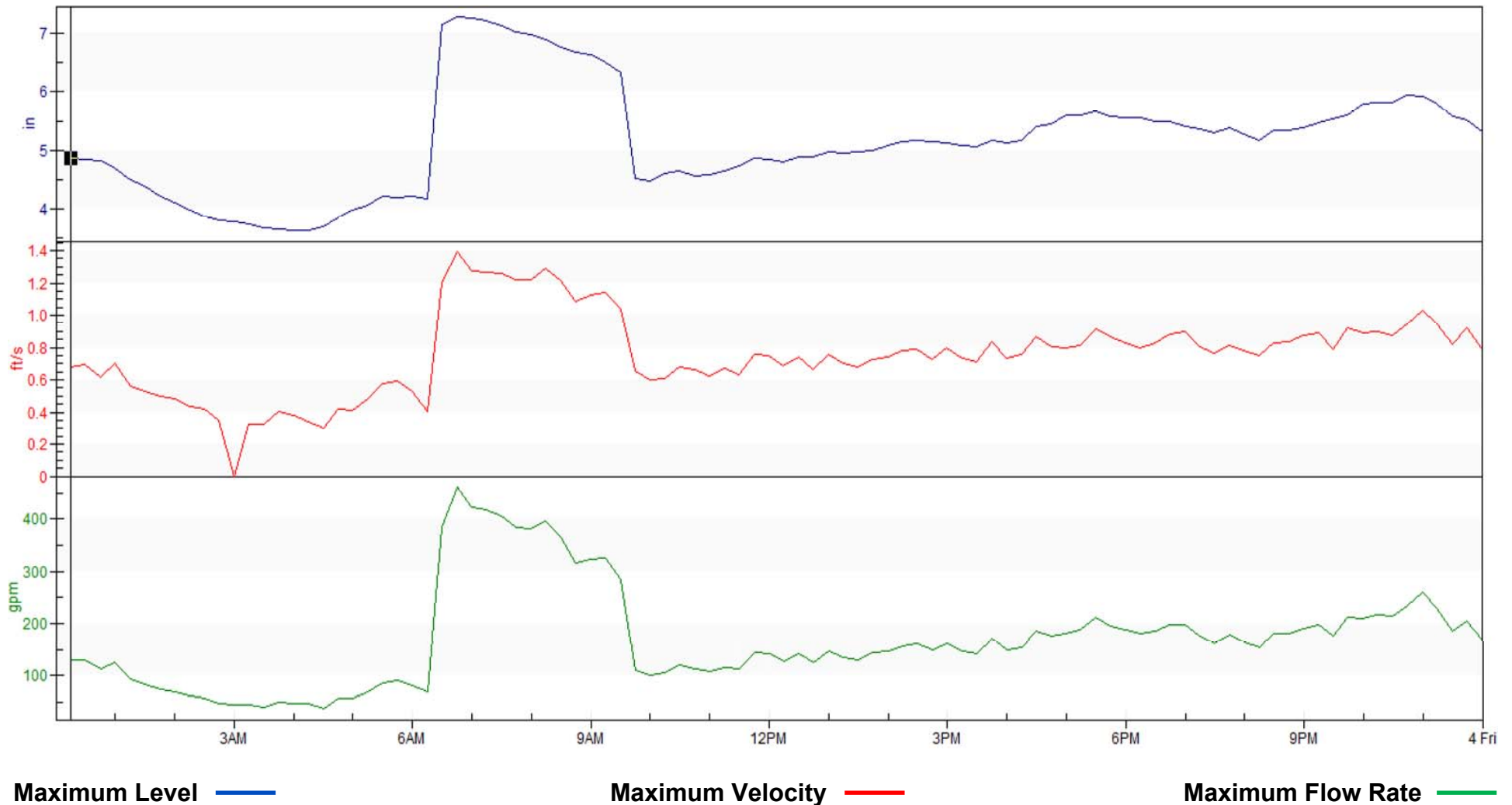
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Wednesday - A.M. 8/2/2023

Wednesday - P.M. 8/2/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	5.078	0.672	135.344	12:00:00 PM	6.657	1.117	326.534
12:15:00 AM	4.967	0.666	130.01	12:15:00 PM	6.559	1.134	325.092
12:30:00 AM	4.802	0.673	122.174	12:30:00 PM	6.144	0.951	250.157
12:45:00 AM	4.703	0.628	111.009	12:45:00 PM	4.816	0.67	125.114
1:00:00 AM	4.597	0.589	100.468	1:00:00 PM	4.971	0.756	147.623
1:15:00 AM	4.517	0.612	103.614	1:15:00 PM	4.933	0.72	139.166
1:30:00 AM	4.506	0.613	104.11	1:30:00 PM	4.83	0.68	126.053
1:45:00 AM	4.343	0.609	96.307	1:45:00 PM	4.877	0.955	177.937
2:00:00 AM	4.17	0.471	71.712	2:00:00 PM	4.894	0.708	135.203
2:15:00 AM	4.019	0.532	75.224	2:15:00 PM	4.851	0.755	140.632
2:30:00 AM	3.937	0.502	69.758	2:30:00 PM	4.741	0.663	117.976
2:45:00 AM	3.839	0.41	54.283	2:45:00 PM	4.613	0.575	101.093
3:00:00 AM	3.757	0.4	52.43	3:00:00 PM	4.721	0.681	123.588
3:15:00 AM	3.728	0.394	50.522	3:15:00 PM	4.79	0.624	115.494
3:30:00 AM	3.732	0.414	53.69	3:30:00 PM	4.797	0.677	125.673
3:45:00 AM	3.698	0.28	35.86	3:45:00 PM	4.764	0.71	130.646
4:00:00 AM	3.692	0.375	47.843	4:00:00 PM	4.811	0.693	126.122
4:15:00 AM	3.731	0.32	41.528	4:15:00 PM	5.066	0.708	142.18
4:30:00 AM	3.811	0.443	59.286	4:30:00 PM	5.388	0.822	175.088
4:45:00 AM	3.975	0.472	64.246	4:45:00 PM	5.398	0.89	195.287
5:00:00 AM	3.979	0.544	77.309	5:00:00 PM	5.393	0.829	180.034
5:15:00 AM	3.98	0.479	67.381	5:15:00 PM	5.397	0.873	190.293
5:30:00 AM	4.029	0.504	72.972	5:30:00 PM	5.326	0.802	170.882
5:45:00 AM	4.075	0.471	69.352	5:45:00 PM	5.31	0.791	168.515
6:00:00 AM	4.089	0.545	80.529	6:00:00 PM	5.352	0.813	174.618
6:15:00 AM	4.125	0.543	81.268	6:15:00 PM	5.374	0.891	192.11
6:30:00 AM	4.263	0.505	76.276	6:30:00 PM	5.337	0.791	170.589
6:45:00 AM	4.274	0.577	90.023	6:45:00 PM	5.366	0.884	191.32
7:00:00 AM	4.209	0.524	80.815	7:00:00 PM	5.344	0.812	174.77
7:15:00 AM	4.241	0.616	95.274	7:15:00 PM	5.589	0.966	218.835
7:30:00 AM	4.322	0.495	79.332	7:30:00 PM	5.574	0.904	207.584
7:45:00 AM	4.399	0.56	91.954	7:45:00 PM	5.421	0.814	179.859
8:00:00 AM	4.412	0.562	92.207	8:00:00 PM	5.263	0.825	174.629
8:15:00 AM	4.385	0.586	94.456	8:15:00 PM	5.39	0.775	167.716
8:30:00 AM	4.302	0.586	93.057	8:30:00 PM	5.481	0.902	200.625
8:45:00 AM	7.301	1.294	431.943	8:45:00 PM	5.425	0.832	183.957
9:00:00 AM	7.471	1.366	460.549	9:00:00 PM	5.395	0.829	178.215
9:15:00 AM	7.47	1.416	486.449	9:15:00 PM	5.425	0.854	186.423
9:30:00 AM	7.455	1.381	466.135	9:30:00 PM	5.706	0.93	217.84
9:45:00 AM	7.325	1.316	441.094	9:45:00 PM	5.667	0.871	201.939
10:00:00 AM	7.285	1.308	434.32	10:00:00 PM	5.831	0.921	225.308
10:15:00 AM	7.221	1.332	437.802	10:15:00 PM	5.851	1.006	247.194
10:30:00 AM	7.165	1.27	413.104	10:30:00 PM	5.804	0.896	217.644
10:45:00 AM	7.026	1.25	390.91	10:45:00 PM	5.832	0.883	214.879
11:00:00 AM	6.968	1.235	386.645	11:00:00 PM	5.805	0.986	239.528
11:15:00 AM	6.873	1.165	357.836	11:15:00 PM	5.677	0.905	213.284
11:30:00 AM	6.816	1.314	399.134	11:30:00 PM	5.467	0.841	185.176
11:45:00 AM	6.76	1.14	340.757	11:45:00 PM	5.315	0.762	163.554
				Inches	Feet/Sec	GPM	
Daily Avg:				5.173	0.779	177.020	
Daily Min:				3.692	0.28	35.86	
Daily Max:				7.471	1.416	486.449	
Peak to Avg:						2.75	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/3/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Thursday - A.M. 8/3/2023

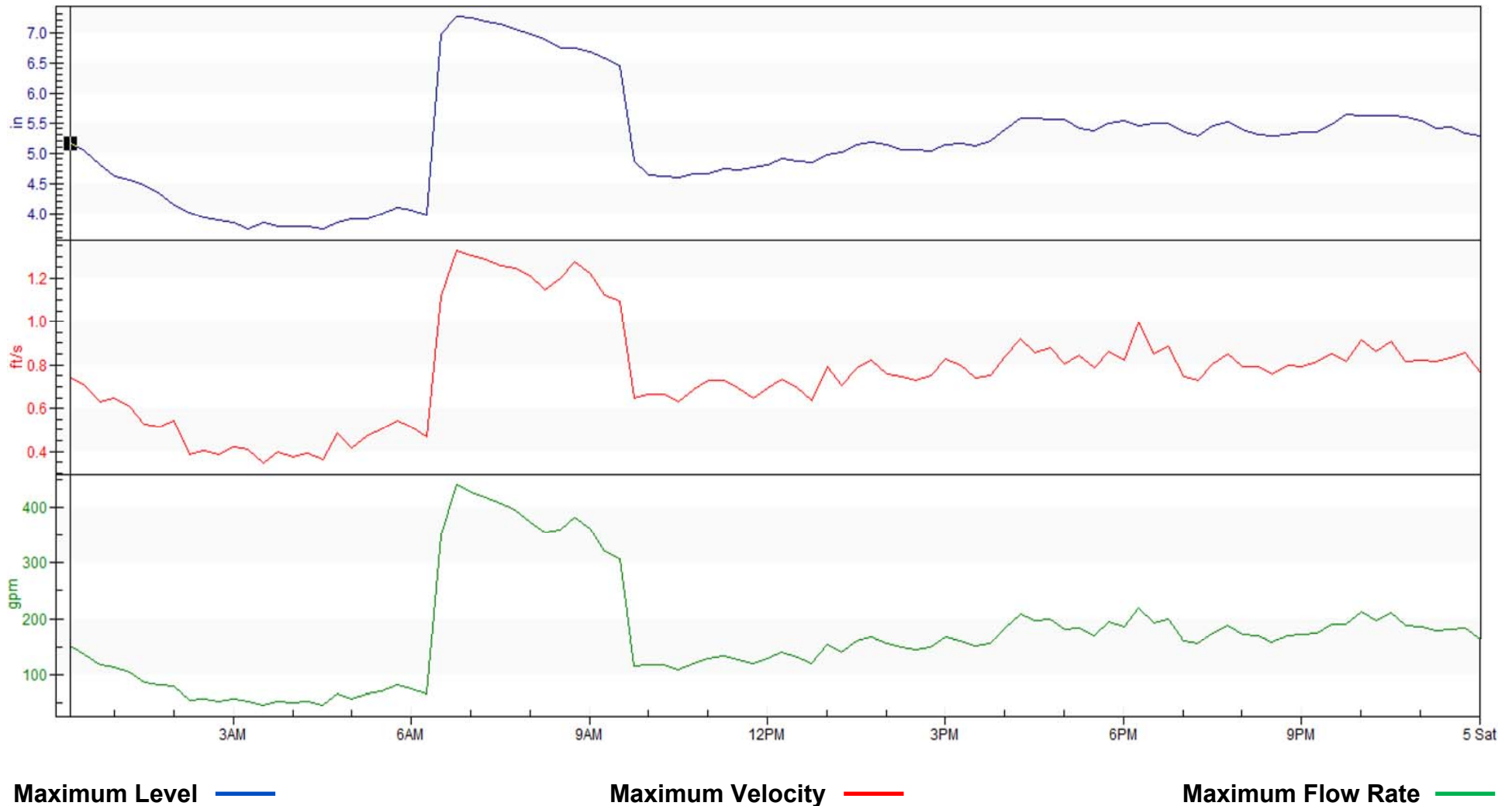
Time	Level	Velocity	Flow
12:00:00 AM	5.159	0.759	151.722
12:15:00 AM	4.873	0.682	129.472
12:30:00 AM	4.854	0.691	130.071
12:45:00 AM	4.822	0.615	113.769
1:00:00 AM	4.702	0.699	124.43
1:15:00 AM	4.5	0.562	94.669
1:30:00 AM	4.385	0.528	83.005
1:45:00 AM	4.208	0.497	75.447
2:00:00 AM	4.108	0.483	70.586
2:15:00 AM	3.989	0.433	61.802
2:30:00 AM	3.874	0.419	57.357
2:45:00 AM	3.8	0.35	46.62
3:00:00 AM	3.794	0	45.981
3:15:00 AM	3.738	0.324	45.002
3:30:00 AM	3.682	0.328	41.497
3:45:00 AM	3.649	0.403	50.204
4:00:00 AM	3.641	0.378	47.313
4:15:00 AM	3.636	0.343	47.215
4:30:00 AM	3.698	0.302	38.705
4:45:00 AM	3.863	0.423	56.968
5:00:00 AM	3.993	0.413	57.953
5:15:00 AM	4.067	0.48	68.791
5:30:00 AM	4.212	0.573	86.867
5:45:00 AM	4.187	0.59	90.215
6:00:00 AM	4.216	0.529	81.735
6:15:00 AM	4.168	0.405	68.913
6:30:00 AM	7.146	1.206	384.273
6:45:00 AM	7.283	1.39	460.571
7:00:00 AM	7.255	1.277	422.306
7:15:00 AM	7.214	1.269	416.503
7:30:00 AM	7.121	1.26	406.47
7:45:00 AM	7.029	1.219	384.404
8:00:00 AM	6.981	1.217	381.88
8:15:00 AM	6.884	1.29	396.888
8:30:00 AM	6.769	1.212	364.138
8:45:00 AM	6.679	1.086	316.627
9:00:00 AM	6.633	1.124	324.415
9:15:00 AM	6.512	1.141	325.431
9:30:00 AM	6.341	1.038	285.335
9:45:00 AM	4.525	0.655	110.397
10:00:00 AM	4.486	0.599	101.139
10:15:00 AM	4.611	0.607	106.54
10:30:00 AM	4.649	0.675	119.952
10:45:00 AM	4.559	0.66	113.917
11:00:00 AM	4.591	0.627	107.499
11:15:00 AM	4.642	0.668	114.95
11:30:00 AM	4.738	0.635	112.646
11:45:00 AM	4.867	0.756	143.327

Thursday - P.M. 8/3/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.853	0.753	141.14
12:15:00 PM	4.796	0.688	126.661
12:30:00 PM	4.878	0.744	141.356
12:45:00 PM	4.885	0.661	125.987
1:00:00 PM	4.973	0.761	146.785
1:15:00 PM	4.953	0.704	135.183
1:30:00 PM	4.972	0.678	131.129
1:45:00 PM	4.996	0.729	143.545
2:00:00 PM	5.072	0.739	147.612
2:15:00 PM	5.146	0.782	157.555
2:30:00 PM	5.158	0.792	162.075
2:45:00 PM	5.156	0.726	149.406
3:00:00 PM	5.121	0.796	162.19
3:15:00 PM	5.092	0.733	146.866
3:30:00 PM	5.059	0.711	141.73
3:45:00 PM	5.162	0.838	169.963
4:00:00 PM	5.134	0.736	150.083
4:15:00 PM	5.173	0.756	154.443
4:30:00 PM	5.402	0.863	186.267
4:45:00 PM	5.445	0.807	176.546
5:00:00 PM	5.591	0.793	180.731
5:15:00 PM	5.591	0.814	187.605
5:30:00 PM	5.655	0.914	211.462
5:45:00 PM	5.572	0.864	195.511
6:00:00 PM	5.551	0.828	186.89
6:15:00 PM	5.547	0.795	181.236
6:30:00 PM	5.501	0.827	185.135
6:45:00 PM	5.493	0.88	197.887
7:00:00 PM	5.414	0.897	197.581
7:15:00 PM	5.353	0.806	174.847
7:30:00 PM	5.288	0.761	162.314
7:45:00 PM	5.375	0.816	177.945
8:00:00 PM	5.274	0.784	163.539
8:15:00 PM	5.178	0.749	155.023
8:30:00 PM	5.345	0.83	179.572
8:45:00 PM	5.351	0.837	181.495
9:00:00 PM	5.385	0.876	191.534
9:15:00 PM	5.46	0.891	197.179
9:30:00 PM	5.53	0.786	175.797
9:45:00 PM	5.598	0.925	211.643
10:00:00 PM	5.801	0.888	208.98
10:15:00 PM	5.823	0.896	217.394
10:30:00 PM	5.817	0.878	213.62
10:45:00 PM	5.946	0.945	235.134
11:00:00 PM	5.932	1.036	259.422
11:15:00 PM	5.784	0.949	229.377
11:30:00 PM	5.57	0.819	185.177
11:45:00 PM	5.509	0.924	205.483

	Inches	Feet/Sec	GPM
Daily Avg:	5.170	0.759	170.540
Daily Min:	3.636	0	38.705
Daily Max:	7.283	1.39	460.571
Peak to Avg:			2.70

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/4/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Friday - A.M. 8/4/2023

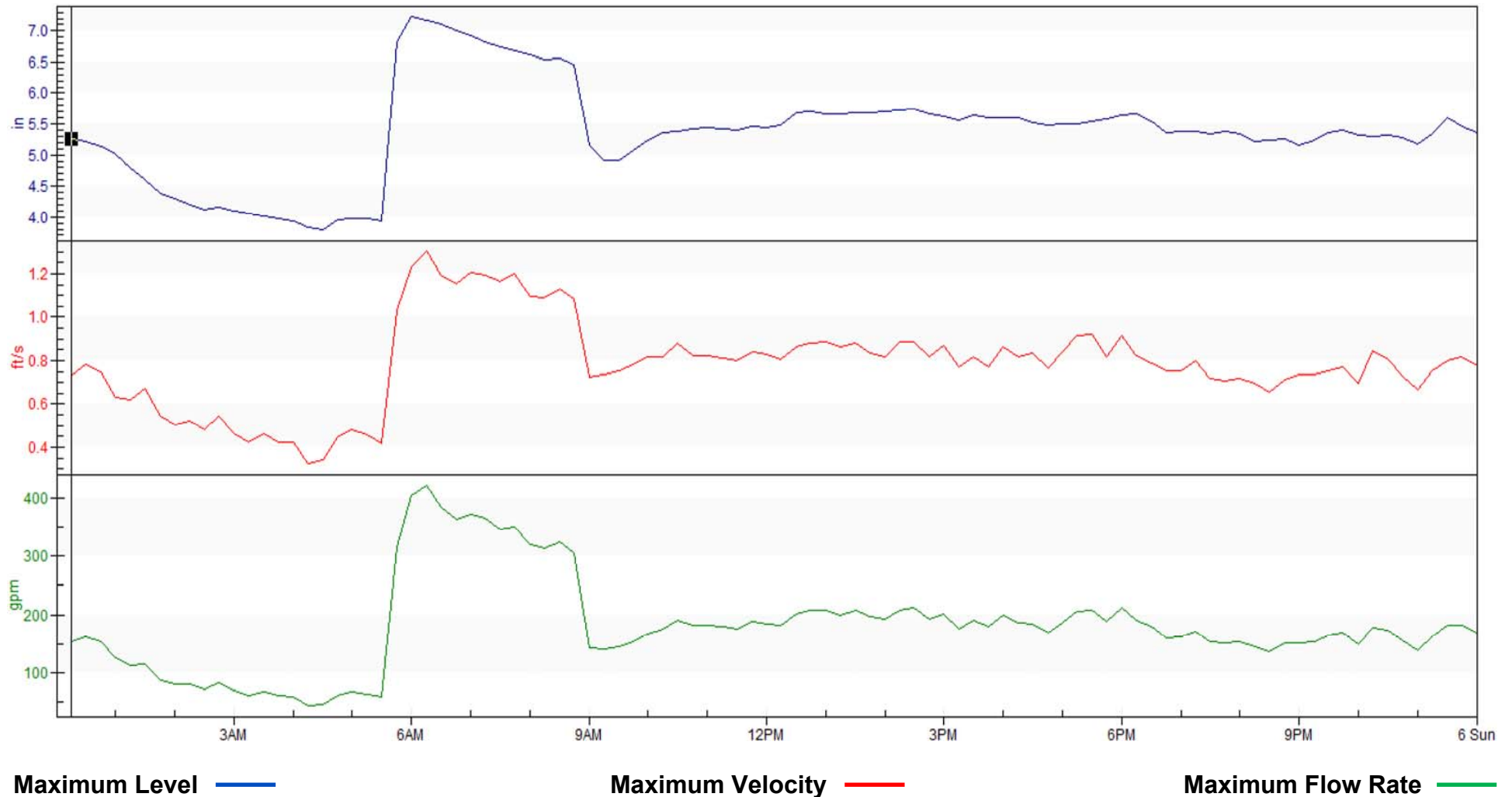
Time	Level	Velocity	Flow
12:00:00 AM	5.32	0.786	169.035
12:15:00 AM	5.155	0.742	152.691
12:30:00 AM	5.022	0.703	134.824
12:45:00 AM	4.81	0.631	117.604
1:00:00 AM	4.625	0.645	113.597
1:15:00 AM	4.563	0.605	104.243
1:30:00 AM	4.476	0.525	85.872
1:45:00 AM	4.317	0.516	82.444
2:00:00 AM	4.141	0.541	80.023
2:15:00 AM	4.005	0.386	55.49
2:30:00 AM	3.934	0.403	56.367
2:45:00 AM	3.893	0.383	52.261
3:00:00 AM	3.839	0.42	56.761
3:15:00 AM	3.749	0.409	53.446
3:30:00 AM	3.837	0.345	46.225
3:45:00 AM	3.791	0.4	53.063
4:00:00 AM	3.78	0.375	49.225
4:15:00 AM	3.787	0.391	51.756
4:30:00 AM	3.741	0.363	46.596
4:45:00 AM	3.853	0.486	65.088
5:00:00 AM	3.907	0.415	57.57
5:15:00 AM	3.914	0.472	65.304
5:30:00 AM	3.985	0.504	70.992
5:45:00 AM	4.103	0.543	80.735
6:00:00 AM	4.048	0.512	74.64
6:15:00 AM	3.98	0.466	66.338
6:30:00 AM	6.967	1.116	349.292
6:45:00 AM	7.261	1.328	439.681
7:00:00 AM	7.245	1.302	425.982
7:15:00 AM	7.173	1.285	418.377
7:30:00 AM	7.125	1.257	405.74
7:45:00 AM	7.047	1.248	395.568
8:00:00 AM	6.976	1.213	373.227
8:15:00 AM	6.885	1.149	353.73
8:30:00 AM	6.746	1.199	359.079
8:45:00 AM	6.748	1.275	380.725
9:00:00 AM	6.68	1.221	360.626
9:15:00 AM	6.578	1.126	321.201
9:30:00 AM	6.45	1.095	308.219
9:45:00 AM	4.871	0.65	114.841
10:00:00 AM	4.645	0.663	117.704
10:15:00 AM	4.624	0.665	116.9
10:30:00 AM	4.586	0.627	108.675
10:45:00 AM	4.66	0.689	120.969
11:00:00 AM	4.659	0.729	128.293
11:15:00 AM	4.745	0.728	133.214
11:30:00 AM	4.727	0.692	125.978
11:45:00 AM	4.764	0.648	119.161

Friday - P.M. 8/4/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.799	0.696	129.047
12:15:00 PM	4.909	0.733	140.174
12:30:00 PM	4.864	0.692	131.083
12:45:00 PM	4.848	0.638	119.652
1:00:00 PM	4.969	0.795	153.351
1:15:00 PM	5.006	0.707	139.323
1:30:00 PM	5.132	0.789	161.299
1:45:00 PM	5.176	0.82	167.749
2:00:00 PM	5.144	0.757	155.269
2:15:00 PM	5.051	0.743	148.581
2:30:00 PM	5.063	0.727	144.969
2:45:00 PM	5.028	0.755	149.83
3:00:00 PM	5.138	0.824	167.097
3:15:00 PM	5.167	0.797	161.357
3:30:00 PM	5.112	0.743	151.002
3:45:00 PM	5.208	0.75	155.8
4:00:00 PM	5.381	0.839	183.256
4:15:00 PM	5.572	0.921	207.624
4:30:00 PM	5.576	0.858	196.665
4:45:00 PM	5.557	0.882	199.026
5:00:00 PM	5.549	0.805	180.777
5:15:00 PM	5.404	0.843	182.566
5:30:00 PM	5.362	0.785	170.684
5:45:00 PM	5.485	0.863	193.552
6:00:00 PM	5.532	0.821	185.1
6:15:00 PM	5.444	0.997	220.015
6:30:00 PM	5.488	0.852	191.443
6:45:00 PM	5.487	0.885	198.777
7:00:00 PM	5.349	0.747	160.849
7:15:00 PM	5.274	0.73	155.123
7:30:00 PM	5.454	0.806	174.058
7:45:00 PM	5.503	0.85	188.504
8:00:00 PM	5.39	0.79	172.44
8:15:00 PM	5.305	0.79	169.208
8:30:00 PM	5.285	0.759	158.727
8:45:00 PM	5.298	0.796	169.852
9:00:00 PM	5.335	0.795	171.559
9:15:00 PM	5.344	0.818	175.197
9:30:00 PM	5.464	0.849	189.686
9:45:00 PM	5.63	0.818	190.155
10:00:00 PM	5.613	0.916	211.671
10:15:00 PM	5.618	0.863	197.165
10:30:00 PM	5.614	0.907	210.012
10:45:00 PM	5.602	0.817	187.76
11:00:00 PM	5.533	0.821	185.761
11:15:00 PM	5.412	0.813	177.963
11:30:00 PM	5.436	0.833	181.793
11:45:00 PM	5.327	0.854	184.022

	Inches	Feet/Sec	GPM
Daily Avg:	5.165	0.766	169.967
Daily Min:	3.741	0.345	46.225
Daily Max:	7.261	1.328	439.681
Peak to Avg:			2.59

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/5/2023, 12:00 a.m. - 12:00 p.m.**

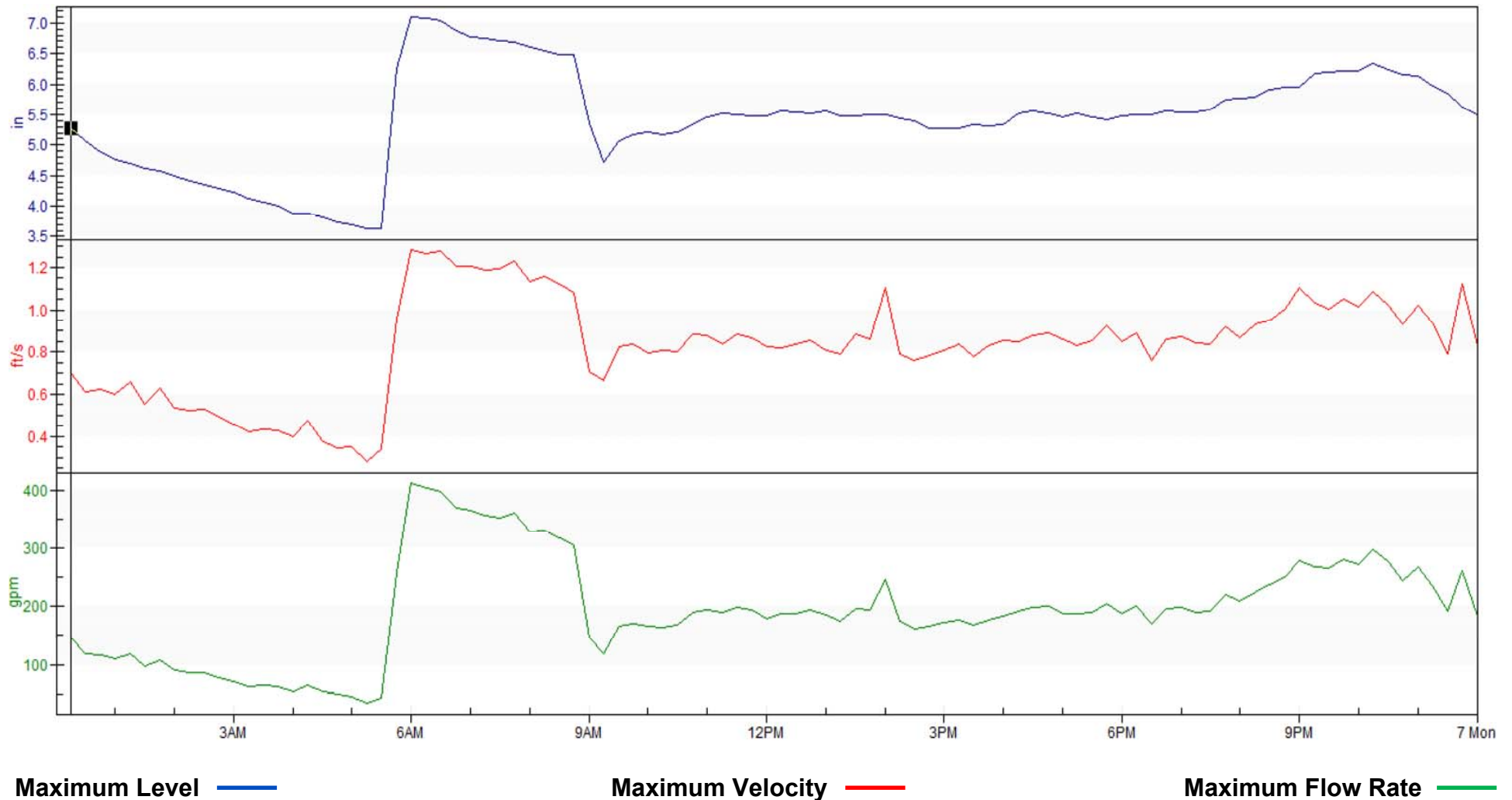
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Saturday - A.M. 8/5/2023

Saturday - P.M. 8/5/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	5.276	0.765	162.594	12:00:00 PM	5.439	0.827	183.493
12:15:00 AM	5.253	0.732	154.634	12:15:00 PM	5.474	0.808	180.798
12:30:00 AM	5.215	0.779	162.85	12:30:00 PM	5.683	0.862	201.402
12:45:00 AM	5.134	0.747	152.874	12:45:00 PM	5.703	0.881	206.915
1:00:00 AM	5.021	0.633	125.466	1:00:00 PM	5.671	0.887	208.258
1:15:00 AM	4.785	0.617	112.924	1:15:00 PM	5.659	0.864	200.052
1:30:00 AM	4.603	0.67	113.846	1:30:00 PM	5.692	0.881	208.431
1:45:00 AM	4.378	0.543	86.397	1:45:00 PM	5.688	0.832	196.494
2:00:00 AM	4.289	0.504	79.196	2:00:00 PM	5.702	0.816	193.294
2:15:00 AM	4.204	0.523	79.077	2:15:00 PM	5.725	0.885	207.675
2:30:00 AM	4.123	0.48	71.37	2:30:00 PM	5.74	0.887	212.208
2:45:00 AM	4.153	0.547	82.671	2:45:00 PM	5.66	0.816	191.489
3:00:00 AM	4.093	0.462	68.138	3:00:00 PM	5.616	0.866	200.296
3:15:00 AM	4.057	0.421	60.823	3:15:00 PM	5.559	0.771	174.97
3:30:00 AM	4.004	0.464	66.052	3:30:00 PM	5.637	0.817	190.526
3:45:00 AM	3.971	0.422	59.515	3:45:00 PM	5.609	0.773	179.094
4:00:00 AM	3.928	0.425	58.584	4:00:00 PM	5.592	0.865	199.462
4:15:00 AM	3.837	0.324	43.732	4:15:00 PM	5.597	0.815	186.936
4:30:00 AM	3.79	0.339	44.925	4:30:00 PM	5.517	0.837	184.598
4:45:00 AM	3.949	0.448	61.547	4:45:00 PM	5.473	0.766	168.599
5:00:00 AM	3.974	0.478	67.925	5:00:00 PM	5.504	0.838	187.145
5:15:00 AM	3.973	0.455	63.586	5:15:00 PM	5.502	0.914	205.621
5:30:00 AM	3.926	0.42	58	5:30:00 PM	5.545	0.922	208.617
5:45:00 AM	6.832	1.034	314.983	5:45:00 PM	5.582	0.814	187.314
6:00:00 AM	7.232	1.23	405.245	6:00:00 PM	5.636	0.914	211.336
6:15:00 AM	7.17	1.304	421.445	6:15:00 PM	5.661	0.823	190.628
6:30:00 AM	7.102	1.196	384.222	6:30:00 PM	5.548	0.788	179.783
6:45:00 AM	7.015	1.153	364.117	6:45:00 PM	5.351	0.751	160.643
7:00:00 AM	6.92	1.207	372.928	7:00:00 PM	5.382	0.752	162.232
7:15:00 AM	6.833	1.197	364.648	7:15:00 PM	5.378	0.802	171.962
7:30:00 AM	6.747	1.167	346.752	7:30:00 PM	5.337	0.719	154.523
7:45:00 AM	6.682	1.202	351.182	7:45:00 PM	5.377	0.709	151.784
8:00:00 AM	6.625	1.097	320.295	8:00:00 PM	5.346	0.718	153.992
8:15:00 AM	6.541	1.092	313.427	8:15:00 PM	5.206	0.695	143.94
8:30:00 AM	6.55	1.129	324.527	8:30:00 PM	5.233	0.655	136.014
8:45:00 AM	6.463	1.083	305.388	8:45:00 PM	5.255	0.715	150.601
9:00:00 AM	5.154	0.724	141.94	9:00:00 PM	5.155	0.738	151.196
9:15:00 AM	4.92	0.739	139.732	9:15:00 PM	5.239	0.738	153.698
9:30:00 AM	4.917	0.754	144.974	9:30:00 PM	5.362	0.754	163.956
9:45:00 AM	5.083	0.785	152.627	9:45:00 PM	5.404	0.771	169.246
10:00:00 AM	5.229	0.815	167.655	10:00:00 PM	5.315	0.698	149.938
10:15:00 AM	5.358	0.818	176.175	10:15:00 PM	5.305	0.845	178.026
10:30:00 AM	5.37	0.881	190.022	10:30:00 PM	5.324	0.808	172.335
10:45:00 AM	5.411	0.823	181.258	10:45:00 PM	5.281	0.73	155.282
11:00:00 AM	5.436	0.821	181.826	11:00:00 PM	5.185	0.667	137.811
11:15:00 AM	5.421	0.811	179.104	11:15:00 PM	5.346	0.754	163.187
11:30:00 AM	5.396	0.801	175.713	11:30:00 PM	5.596	0.802	182.132
11:45:00 AM	5.467	0.843	188.347	11:45:00 PM	5.458	0.817	182.119
				Inches	Feet/Sec	GPM	
Daily Avg:				5.366	0.785	179.713	
Daily Min:				3.79	0.324	43.732	
Daily Max:				7.232	1.304	421.445	
Peak to Avg:						2.35	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/6/2023, 12:00 a.m. - 12:00 p.m.**

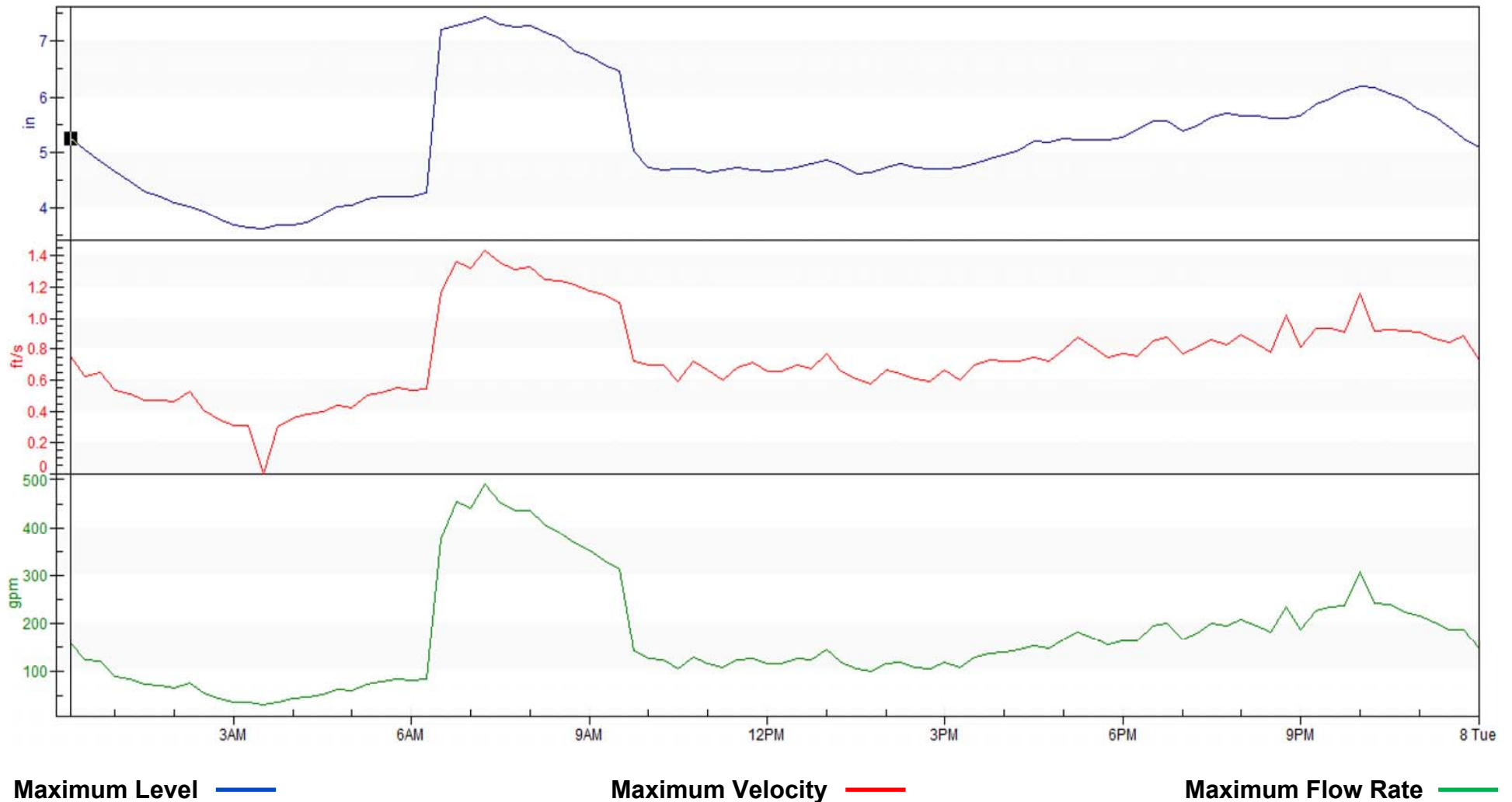
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Sunday - A.M. 8/6/2023

Sunday - P.M. 8/6/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	5.349	0.779	168.797	12:00:00 PM	5.481	0.827	179.836
12:15:00 AM	5.279	0.703	145.976	12:15:00 PM	5.568	0.82	188.075
12:30:00 AM	5.079	0.614	118.85	12:30:00 PM	5.539	0.838	188.298
12:45:00 AM	4.877	0.624	116.471	12:45:00 PM	5.526	0.856	194.228
1:00:00 AM	4.771	0.601	110.299	1:00:00 PM	5.559	0.807	184.72
1:15:00 AM	4.705	0.657	118.805	1:15:00 PM	5.47	0.789	174.367
1:30:00 AM	4.623	0.555	97.778	1:30:00 PM	5.484	0.887	196.377
1:45:00 AM	4.58	0.63	108.275	1:45:00 PM	5.49	0.862	193.25
2:00:00 AM	4.495	0.538	90.152	2:00:00 PM	5.49	1.103	245.797
2:15:00 AM	4.407	0.52	85.642	2:15:00 PM	5.432	0.792	175.449
2:30:00 AM	4.348	0.531	85.438	2:30:00 PM	5.39	0.76	160.801
2:45:00 AM	4.288	0.495	78.363	2:45:00 PM	5.278	0.785	165.689
3:00:00 AM	4.234	0.456	70.172	3:00:00 PM	5.278	0.808	171.808
3:15:00 AM	4.117	0.422	63.067	3:15:00 PM	5.275	0.837	177.785
3:30:00 AM	4.069	0.436	64.067	3:30:00 PM	5.333	0.78	168.249
3:45:00 AM	4.005	0.43	61.777	3:45:00 PM	5.313	0.83	176.685
4:00:00 AM	3.877	0.401	54.583	4:00:00 PM	5.33	0.858	183.718
4:15:00 AM	3.873	0.474	64.819	4:15:00 PM	5.521	0.85	192.568
4:30:00 AM	3.826	0.373	53.496	4:30:00 PM	5.565	0.877	199.232
4:45:00 AM	3.742	0.344	48.583	4:45:00 PM	5.512	0.893	201.844
5:00:00 AM	3.689	0.349	44.517	5:00:00 PM	5.463	0.861	188.417
5:15:00 AM	3.632	0.279	34.83	5:15:00 PM	5.51	0.833	188.187
5:30:00 AM	3.632	0.338	42.001	5:30:00 PM	5.45	0.857	189.423
5:45:00 AM	6.251	0.956	257.672	5:45:00 PM	5.418	0.929	204.785
6:00:00 AM	7.1	1.283	412.128	6:00:00 PM	5.473	0.849	188.871
6:15:00 AM	7.088	1.262	404.552	6:15:00 PM	5.499	0.891	200.777
6:30:00 AM	7.042	1.278	398.119	6:30:00 PM	5.49	0.762	170.547
6:45:00 AM	6.881	1.204	370.439	6:45:00 PM	5.564	0.861	197.191
7:00:00 AM	6.777	1.208	364.008	7:00:00 PM	5.539	0.873	198.474
7:15:00 AM	6.754	1.19	356.951	7:15:00 PM	5.549	0.844	191.03
7:30:00 AM	6.709	1.195	352.521	7:30:00 PM	5.583	0.835	192.131
7:45:00 AM	6.699	1.232	361.126	7:45:00 PM	5.746	0.923	221.273
8:00:00 AM	6.602	1.132	327.9	8:00:00 PM	5.774	0.868	209.441
8:15:00 AM	6.546	1.158	329.616	8:15:00 PM	5.778	0.934	225.543
8:30:00 AM	6.485	1.125	318.16	8:30:00 PM	5.91	0.952	237.108
8:45:00 AM	6.486	1.083	305.474	8:45:00 PM	5.943	1.003	251.077
9:00:00 AM	5.365	0.708	147.683	9:00:00 PM	5.954	1.103	277.661
9:15:00 AM	4.73	0.667	118.886	9:15:00 PM	6.181	1.033	268.041
9:30:00 AM	5.062	0.826	165.627	9:30:00 PM	6.191	1.004	266.127
9:45:00 AM	5.163	0.838	171.363	9:45:00 PM	6.211	1.052	280.329
10:00:00 AM	5.218	0.796	166.52	10:00:00 PM	6.211	1.017	271.707
10:15:00 AM	5.167	0.806	164.203	10:15:00 PM	6.333	1.086	297.048
10:30:00 AM	5.221	0.802	167.309	10:30:00 PM	6.247	1.024	275.798
10:45:00 AM	5.334	0.884	190.85	10:45:00 PM	6.146	0.934	243.239
11:00:00 AM	5.462	0.877	193.429	11:00:00 PM	6.129	1.023	267.173
11:15:00 AM	5.51	0.839	189.548	11:15:00 PM	5.974	0.939	234.441
11:30:00 AM	5.492	0.885	198.822	11:30:00 PM	5.85	0.79	191.358
11:45:00 AM	5.488	0.87	193.288	11:45:00 PM	5.622	1.123	261.09
				Inches	Feet/Sec	GPM	
Daily Avg:				5.435	0.831	194.644	
Daily Min:				3.632	0.279	34.83	
Daily Max:				7.1	1.283	412.128	
Peak to Avg:						2.12	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/7/2023, 12:00 a.m. - 12:00 p.m.**

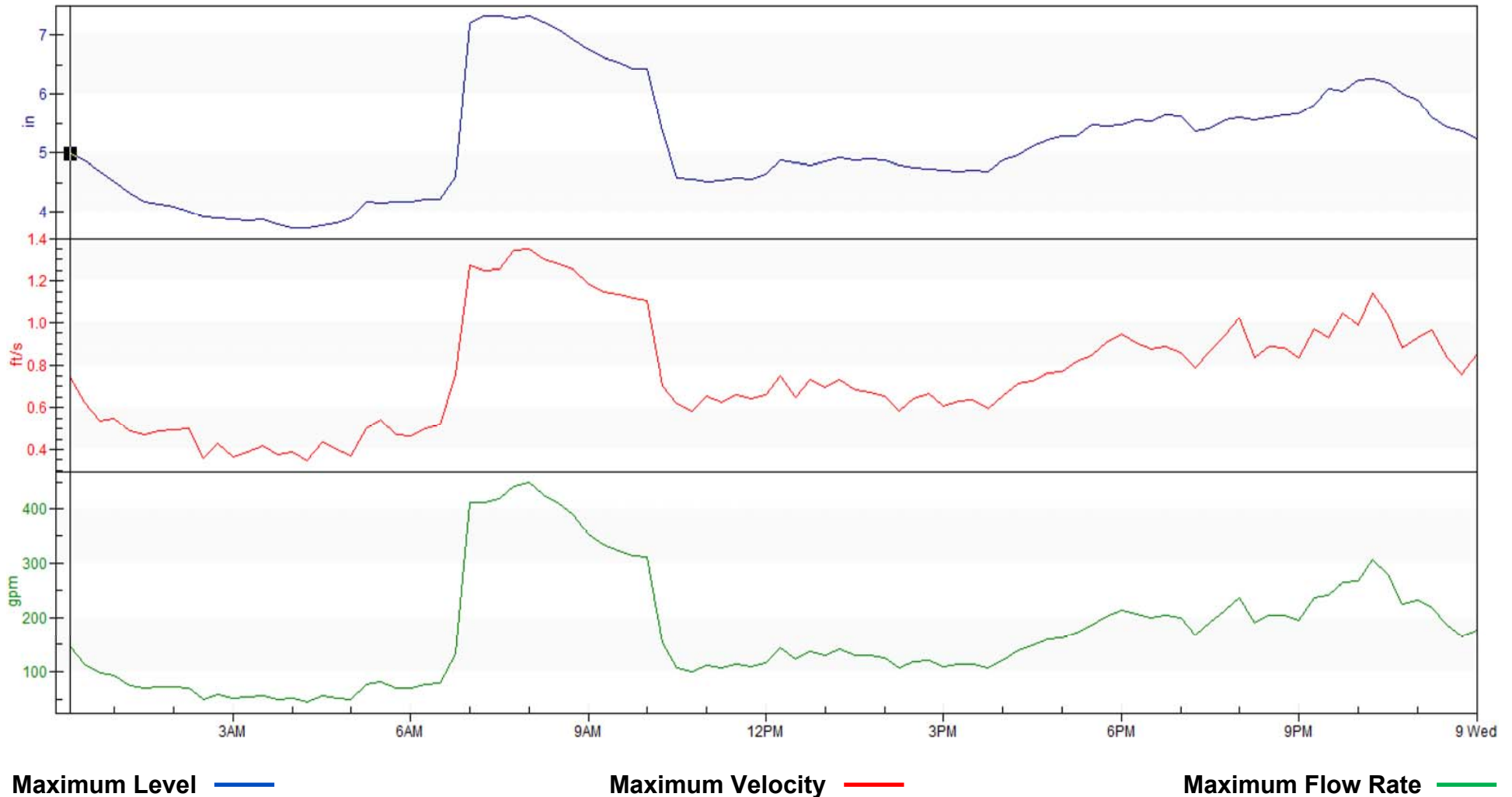
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Monday - A.M. 8/7/2023

Monday - P.M. 8/7/2023

Time	Level	Velocity	Velocity	Time	Level	Velocity	Flow
12:10:00 AM	5.49	0.833	183.921	12:00:00 PM	4.641	0.657	116.236
12:15:00 AM	5.24	0.754	158.699	12:15:00 PM	4.678	0.656	117.666
12:30:00 AM	5.038	0.626	124.725	12:30:00 PM	4.725	0.702	127.627
12:45:00 AM	4.841	0.653	122.845	12:45:00 PM	4.793	0.675	125.339
1:00:00 AM	4.656	0.534	90.929	1:00:00 PM	4.851	0.773	145.98
1:15:00 AM	4.461	0.512	84.578	1:15:00 PM	4.766	0.661	120.019
1:30:00 AM	4.287	0.471	74.586	1:30:00 PM	4.61	0.607	105.649
1:45:00 AM	4.191	0.472	72.37	1:45:00 PM	4.626	0.576	99.975
2:00:00 AM	4.076	0.461	66.743	2:00:00 PM	4.707	0.667	117.524
2:15:00 AM	4.011	0.531	76.371	2:15:00 PM	4.789	0.641	118.749
2:30:00 AM	3.919	0.406	55.55	2:30:00 PM	4.727	0.609	108.661
2:45:00 AM	3.782	0.353	46.012	2:45:00 PM	4.701	0.593	106.766
3:00:00 AM	3.668	0.308	38.937	3:00:00 PM	4.689	0.668	119.922
3:15:00 AM	3.638	0.31	38.486	3:15:00 PM	4.722	0.603	109.631
3:30:00 AM	3.605	0	33.185	3:30:00 PM	4.786	0.695	128.718
3:45:00 AM	3.676	0.307	38.657	3:45:00 PM	4.882	0.727	138.505
4:00:00 AM	3.675	0.356	45.114	4:00:00 PM	4.953	0.727	141.224
4:15:00 AM	3.73	0.384	48.92	4:15:00 PM	5.042	0.726	144.664
4:30:00 AM	3.875	0.399	53.232	4:30:00 PM	5.188	0.745	153.439
4:45:00 AM	4.023	0.436	63.051	4:45:00 PM	5.175	0.724	147.528
5:00:00 AM	4.034	0.427	62.001	5:00:00 PM	5.247	0.793	166.446
5:15:00 AM	4.161	0.504	73.955	5:15:00 PM	5.22	0.876	181.985
5:30:00 AM	4.193	0.521	79.042	5:30:00 PM	5.209	0.811	169.276
5:45:00 AM	4.195	0.554	84.332	5:45:00 PM	5.212	0.747	154.358
6:00:00 AM	4.193	0.536	82.235	6:00:00 PM	5.251	0.772	162.926
6:15:00 AM	4.268	0.547	85.354	6:15:00 PM	5.392	0.757	164.22
6:30:00 AM	7.215	1.171	375.412	6:30:00 PM	5.562	0.855	195.798
6:45:00 AM	7.279	1.365	453.424	6:45:00 PM	5.565	0.873	200.047
7:00:00 AM	7.362	1.319	441.088	7:00:00 PM	5.38	0.771	167.277
7:15:00 AM	7.442	1.431	490.153	7:15:00 PM	5.478	0.814	180.321
7:30:00 AM	7.306	1.353	451.888	7:30:00 PM	5.625	0.859	199.746
7:45:00 AM	7.264	1.314	435.541	7:45:00 PM	5.687	0.83	195.662
8:00:00 AM	7.277	1.332	437.008	8:00:00 PM	5.648	0.894	208.971
8:15:00 AM	7.179	1.25	407.434	8:15:00 PM	5.647	0.834	195.111
8:30:00 AM	7.048	1.239	388.564	8:30:00 PM	5.609	0.783	181.341
8:45:00 AM	6.834	1.22	367.652	8:45:00 PM	5.592	1.018	233.83
9:00:00 AM	6.746	1.173	351.104	9:00:00 PM	5.657	0.809	188.027
9:15:00 AM	6.569	1.149	331.663	9:15:00 PM	5.866	0.932	226.348
9:30:00 AM	6.472	1.105	312.567	9:30:00 PM	5.971	0.929	234.943
9:45:00 AM	5.004	0.724	142.863	9:45:00 PM	6.104	0.912	237.728
10:00:00 AM	4.727	0.702	127.549	10:00:00 PM	6.196	1.158	308.163
10:15:00 AM	4.663	0.7	124.096	10:15:00 PM	6.16	0.914	240.806
10:30:00 AM	4.688	0.592	106.438	10:30:00 PM	6.051	0.928	238.956
10:45:00 AM	4.689	0.721	128.237	10:45:00 PM	5.964	0.913	222.718
11:00:00 AM	4.637	0.667	116.098	11:00:00 PM	5.764	0.906	215.496
11:15:00 AM	4.667	0.602	107.601	11:15:00 PM	5.655	0.865	202.705
11:30:00 AM	4.707	0.681	123.215	11:30:00 PM	5.439	0.845	187.443
11:45:00 AM	4.668	0.716	127.519	11:45:00 PM	5.25	0.888	187.454
				Inches Feet/Sec GPM			
				Daily Avg: 5.172 0.754 171.463			
				Daily Min: 3.605 0 33.185			
				Daily Max: 7.442 1.431 490.153			
				Peak to Avg: 2.86			

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/8/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Tuesday - A.M. 8/8/2023

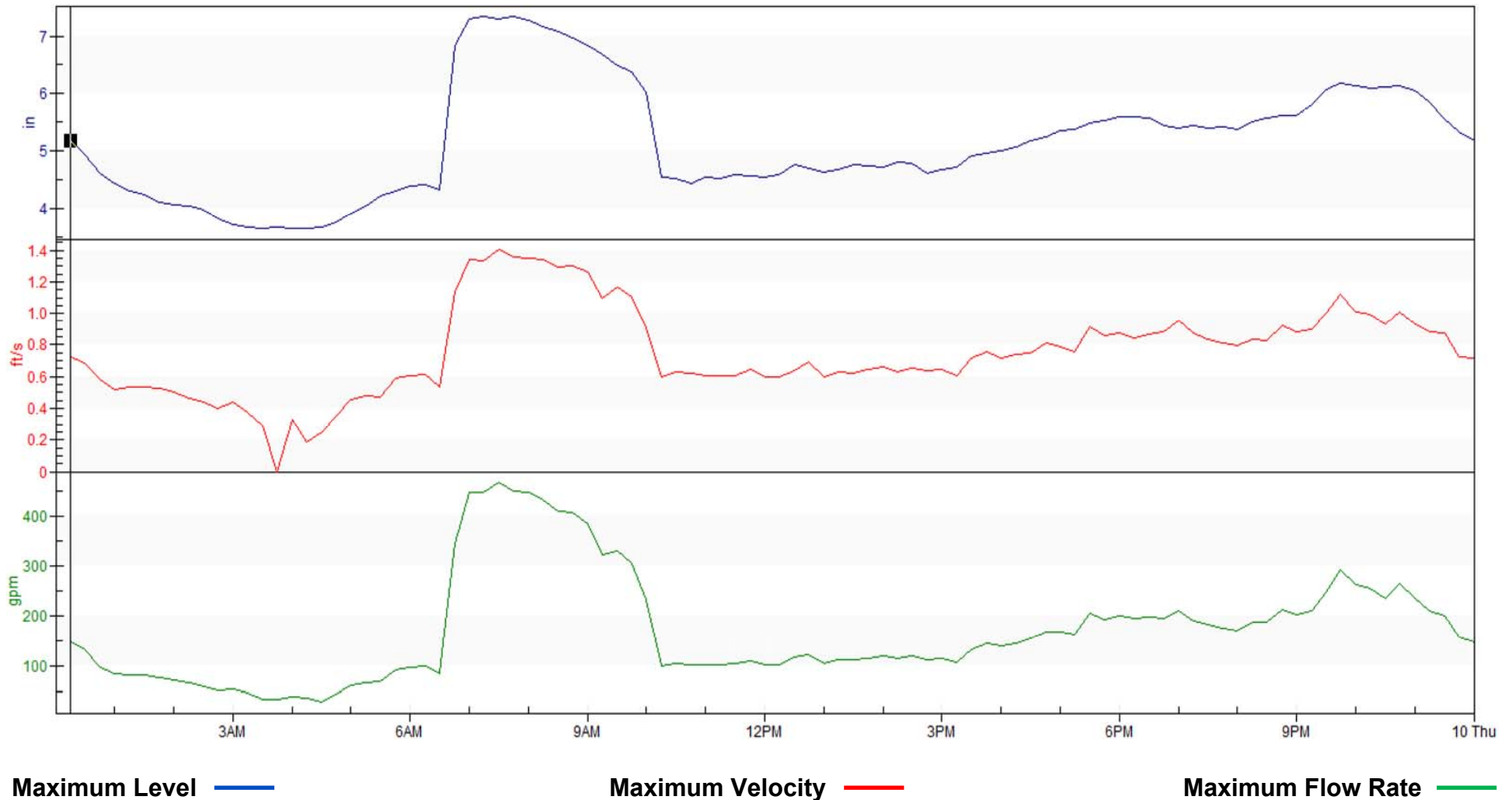
Time	Level	Velocity	Flow
12:00:00 AM	5.081	0.732	147.493
12:15:00 AM	4.979	0.744	145.695
12:30:00 AM	4.878	0.625	114.526
12:45:00 AM	4.69	0.539	96.942
1:00:00 AM	4.521	0.546	93.182
1:15:00 AM	4.322	0.489	75.389
1:30:00 AM	4.167	0.471	70.538
1:45:00 AM	4.132	0.487	72.618
2:00:00 AM	4.096	0.494	71.311
2:15:00 AM	3.999	0.5	70.839
2:30:00 AM	3.921	0.356	49.191
2:45:00 AM	3.896	0.428	59.001
3:00:00 AM	3.884	0.366	50.125
3:15:00 AM	3.865	0.388	52.627
3:30:00 AM	3.87	0.418	56.734
3:45:00 AM	3.796	0.374	49.032
4:00:00 AM	3.727	0.39	50.374
4:15:00 AM	3.729	0.346	44.818
4:30:00 AM	3.774	0.435	56.704
4:45:00 AM	3.81	0.399	52.075
5:00:00 AM	3.903	0.368	49.917
5:15:00 AM	4.181	0.503	76.671
5:30:00 AM	4.159	0.541	82.06
5:45:00 AM	4.176	0.469	70.311
6:00:00 AM	4.177	0.462	70.161
6:15:00 AM	4.209	0.498	76.649
6:30:00 AM	4.209	0.518	79.84
6:45:00 AM	4.61	0.757	132.827
7:00:00 AM	7.202	1.274	413.003
7:15:00 AM	7.329	1.249	412.979
7:30:00 AM	7.322	1.253	419.665
7:45:00 AM	7.284	1.343	442.312
8:00:00 AM	7.326	1.351	448.783
8:15:00 AM	7.217	1.301	427.199
8:30:00 AM	7.098	1.28	410.859
8:45:00 AM	6.92	1.254	388.873
9:00:00 AM	6.749	1.181	351.148
9:15:00 AM	6.632	1.148	333.605
9:30:00 AM	6.534	1.137	323.139
9:45:00 AM	6.44	1.118	313.688
10:00:00 AM	6.425	1.107	309.913
10:15:00 AM	5.378	0.701	153.096
10:30:00 AM	4.591	0.618	107.356
10:45:00 AM	4.557	0.584	99.481
11:00:00 AM	4.519	0.656	111.913
11:15:00 AM	4.547	0.624	105.897
11:30:00 AM	4.587	0.658	113.934
11:45:00 AM	4.567	0.643	109.57

Tuesday - P.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.64	0.662	116.251
12:15:00 PM	4.878	0.751	142.936
12:30:00 PM	4.843	0.651	122.532
12:45:00 PM	4.794	0.734	135.719
1:00:00 PM	4.851	0.695	130.211
1:15:00 PM	4.911	0.731	140.453
1:30:00 PM	4.869	0.685	128.825
1:45:00 PM	4.906	0.674	129.333
2:00:00 PM	4.881	0.657	124.694
2:15:00 PM	4.798	0.581	106.993
2:30:00 PM	4.742	0.644	117.748
2:45:00 PM	4.729	0.664	120.033
3:00:00 PM	4.71	0.607	109.544
3:15:00 PM	4.678	0.629	112.682
3:30:00 PM	4.712	0.638	113.567
3:45:00 PM	4.691	0.598	107.632
4:00:00 PM	4.882	0.657	120.408
4:15:00 PM	4.971	0.713	139.321
4:30:00 PM	5.111	0.727	147.8
4:45:00 PM	5.229	0.759	159.345
5:00:00 PM	5.275	0.769	162.789
5:15:00 PM	5.286	0.818	171.979
5:30:00 PM	5.465	0.847	185.872
5:45:00 PM	5.451	0.907	201.8
6:00:00 PM	5.484	0.949	213.026
6:15:00 PM	5.558	0.907	207.313
6:30:00 PM	5.529	0.875	198.298
6:45:00 PM	5.64	0.887	204.114
7:00:00 PM	5.626	0.856	199.181
7:15:00 PM	5.365	0.787	168.058
7:30:00 PM	5.413	0.86	189.564
7:45:00 PM	5.559	0.942	213.933
8:00:00 PM	5.602	1.022	236.242
8:15:00 PM	5.559	0.833	189.048
8:30:00 PM	5.6	0.886	204.327
8:45:00 PM	5.646	0.878	203.539
9:00:00 PM	5.664	0.833	195.567
9:15:00 PM	5.815	0.973	237.07
9:30:00 PM	6.089	0.929	241.434
9:45:00 PM	6.045	1.046	265.263
10:00:00 PM	6.234	0.989	265.556
10:15:00 PM	6.254	1.142	306.426
10:30:00 PM	6.2	1.044	277.985
10:45:00 PM	6.018	0.881	225.256
11:00:00 PM	5.907	0.928	231.153
11:15:00 PM	5.597	0.965	217.864
11:30:00 PM	5.439	0.834	184.947
11:45:00 PM	5.367	0.757	164.715

	Inches	Feet/Sec	GPM
Daily Avg:	5.162	0.760	171.104
Daily Min:	3.727	0.346	44.818
Daily Max:	7.329	1.351	448.783
Peak to Avg:			2.62

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7066**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/9/2023, 12:00 a.m. - 12:00 p.m.**

Sewer Line Flow Study Summary

Project: City of McFarland, Sewer Flow Study

Location: MH-7066

Pipe Size: 21" VCP

Time Period: 7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.

Level - Inches

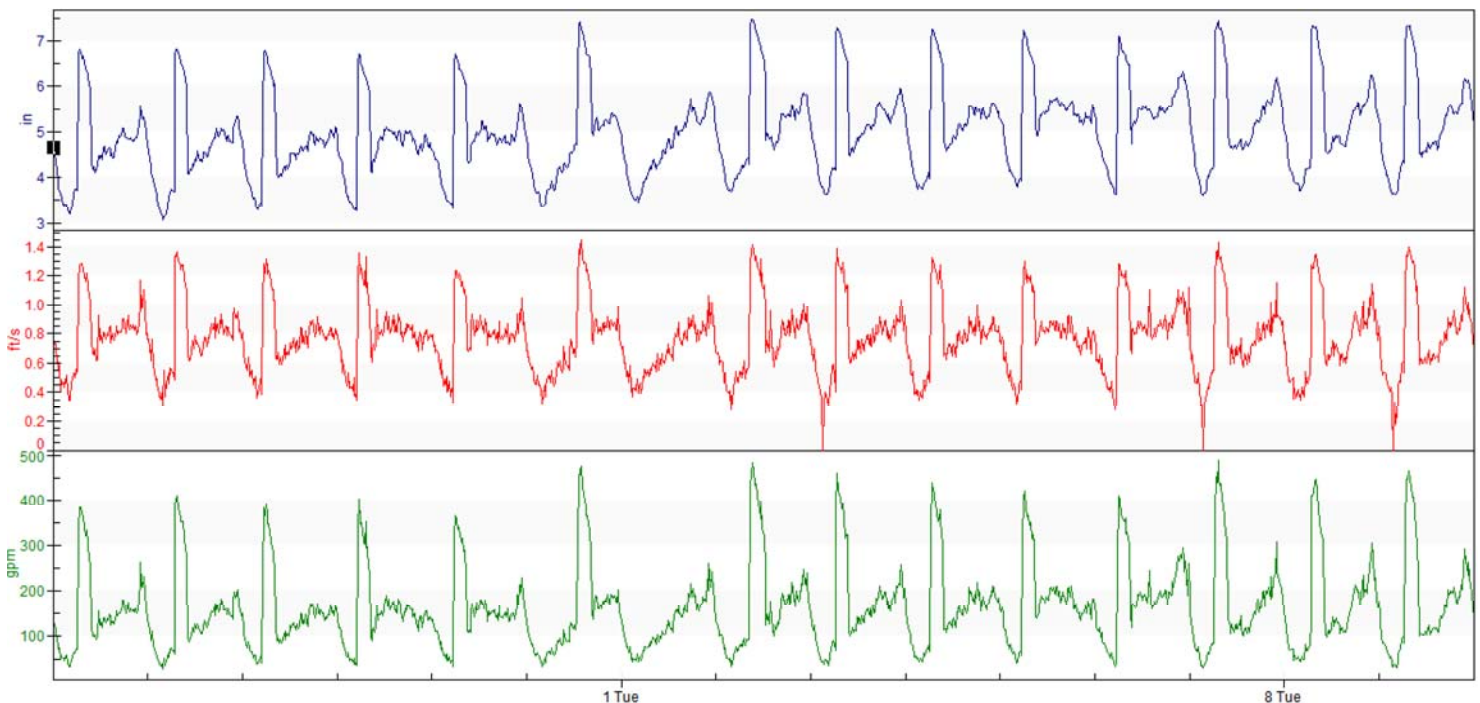
Average:	.....	4.953
Maximum:	.....	7.471
Minimum:	.....	3.042
Max d/D:	.....	35.6%

Velocity - Feet per Second

Average:	.....	0.721
Maximum:	.....	1.445
Minimum:	.....	0.00

Flow Rate - Gallons Per Minute

Average:	.....	153.255
Maximum:	.....	490.153
Minimum:	.....	19.542
Peak to Average	.....	3.04



— Maximum Level

— Maximum Velocity

— Maximum Flow Rate

Sewer Line Daily Totals

Project: **City of McFarland, Sewer Flow Study**

Location: **MH-7066**

Pipe Size: **21" VCP**

Time Period: **7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.**

Daily Totals - US Gallons

Date:	Gallons:
7/26/2023	208,485
7/27/2023	202,678
7/28/2023	210,284
7/29/2023	195,480
7/30/2023	216,410
7/31/2023	211,535
8/1/2023	172,451
8/2/2023	239,273
8/3/2023	230,025
8/4/2023	229,634
8/5/2023	241,812
8/6/2023	180,898
8/7/2023	159,533
8/8/2023	231,836
8/9/2023	230,166
Total Recorded Flow (15 Days)	3,310,300

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7066

Tuesday - A.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 AM	5.238	0.852	177.341
12:15:00 AM	5.181	0.724	148.103
12:30:00 AM	4.941	0.687	132.979
12:45:00 AM	4.597	0.578	98.952
1:00:00 AM	4.436	0.517	85.628
1:15:00 AM	4.3	0.531	83.867
1:30:00 AM	4.23	0.535	83.112
1:45:00 AM	4.103	0.528	77.914
2:00:00 AM	4.07	0.502	73.745
2:15:00 AM	4.047	0.461	67.178
2:30:00 AM	3.963	0.442	60.251
2:45:00 AM	3.823	0.404	54.062
3:00:00 AM	3.719	0.439	56.131
3:15:00 AM	3.666	0.377	47.606
3:30:00 AM	3.65	0.288	36.152
3:45:00 AM	3.66	0	36.299
4:00:00 AM	3.652	0.328	41.298
4:15:00 AM	3.643	0.185	37.139
4:30:00 AM	3.659	0.251	31.439
4:45:00 AM	3.754	0.351	45.679
5:00:00 AM	3.902	0.453	62.725
5:15:00 AM	4.04	0.48	67.235
5:30:00 AM	4.206	0.472	71.721
5:45:00 AM	4.3	0.592	92.579
6:00:00 AM	4.381	0.606	98.991
6:15:00 AM	4.406	0.616	101.363
6:30:00 AM	4.324	0.533	85.45
6:45:00 AM	6.847	1.135	346.92
7:00:00 AM	7.291	1.345	447.981
7:15:00 AM	7.332	1.336	448.324
7:30:00 AM	7.301	1.402	467.576
7:45:00 AM	7.343	1.359	450.827
8:00:00 AM	7.281	1.348	448.04
8:15:00 AM	7.166	1.338	432.389
8:30:00 AM	7.07	1.294	409.658
8:45:00 AM	6.977	1.302	408.298
9:00:00 AM	6.831	1.264	385.007
9:15:00 AM	6.678	1.097	323.957
9:30:00 AM	6.479	1.168	330.714
9:45:00 AM	6.378	1.101	305.195
10:00:00 AM	6.036	0.906	232.459
10:15:00 AM	4.533	0.595	101.482
10:30:00 AM	4.522	0.633	106.309
10:45:00 AM	4.442	0.62	103.24
11:00:00 AM	4.546	0.602	103.444
11:15:00 AM	4.529	0.603	103.274
11:30:00 AM	4.576	0.607	104.584
11:45:00 AM	4.568	0.641	110.728

Tuesday - P.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 PM	4.549	0.601	103.328
12:15:00 PM	4.585	0.596	103.742
12:30:00 PM	4.767	0.639	117.72
12:45:00 PM	4.69	0.69	124.109
1:00:00 PM	4.62	0.595	104.75
1:15:00 PM	4.669	0.628	112.304
1:30:00 PM	4.764	0.62	114.12
1:45:00 PM	4.73	0.647	115.919
2:00:00 PM	4.724	0.665	120.134
2:15:00 PM	4.795	0.63	116.392
2:30:00 PM	4.783	0.652	120.577
2:45:00 PM	4.603	0.641	112.246
3:00:00 PM	4.673	0.647	115.849
3:15:00 PM	4.72	0.607	109.07
3:30:00 PM	4.914	0.719	133.141
3:45:00 PM	4.954	0.755	146.734
4:00:00 PM	5.004	0.719	141.446
4:15:00 PM	5.066	0.736	144.979
4:30:00 PM	5.186	0.745	154.604
4:45:00 PM	5.238	0.809	168.494
5:00:00 PM	5.356	0.788	169.038
5:15:00 PM	5.364	0.754	163.967
5:30:00 PM	5.488	0.912	204.802
5:45:00 PM	5.535	0.861	192.72
6:00:00 PM	5.599	0.875	200.178
6:15:00 PM	5.593	0.847	195.366
6:30:00 PM	5.574	0.868	199.334
6:45:00 PM	5.428	0.886	196.049
7:00:00 PM	5.392	0.957	209.644
7:15:00 PM	5.445	0.873	191.868
7:30:00 PM	5.404	0.831	182.562
7:45:00 PM	5.415	0.809	176.895
8:00:00 PM	5.378	0.795	171.499
8:15:00 PM	5.514	0.838	187.548
8:30:00 PM	5.562	0.828	187.687
8:45:00 PM	5.61	0.925	214.234
9:00:00 PM	5.611	0.885	203.7
9:15:00 PM	5.819	0.895	209.741
9:30:00 PM	6.069	1.003	248.882
9:45:00 PM	6.177	1.121	294.01
10:00:00 PM	6.134	1.007	264.32
10:15:00 PM	6.088	0.997	255.839
10:30:00 PM	6.11	0.932	236.018
10:45:00 PM	6.134	1.012	264.729
11:00:00 PM	6.042	0.934	234.861
11:15:00 PM	5.847	0.883	209.779
11:30:00 PM	5.556	0.876	200.313
11:45:00 PM	5.339	0.728	157.242

	Inches	Feet/Sec	GPM
Daily Avg:	5.158	0.756	172.110
Daily Min:	3.643	0	31.439
Daily Max:	7.343	1.402	467.576
Peak to Avg:			2.72

CITY OF MCFARLAND - SEWER FLOW STUDY

MH Location: **MH-7084**
778 Taylor Ave
McFarland, CA 93250

Pipe Size: **12" VCP**

Time Period: **7/26/2023 - 12:00 a.m. to**
8/9/2023 - 12:00 a.m.

GPS: **35.667140, -119.240147**



Manhole - Layout



Equipment

Teledyne Isco 2150 Area Velocity Flow Meter with 10' measuring range:

Level Measurement:

- Method - Submerged pressure transducer mounted in the flow stream
- Transducer Type - Differential linear integrated circuit pressure transducer
- Range (standard) 0.033 to 10 ft (0.010 to 3.05 m); Maximum Allowable Level 34 ft (10.5 m)
- Accuracy ± 0.01 ft from 0.033 to 10 ft, (± 0.003 m from 0.01 to 3.05 m,)
- Long-Term Stability ± 0.023 ft/yr (± 0.007 m/yr)
- Compensated Range 32° to 122°F (0° to 50°C)

Velocity Measurement:

- Method - Doppler ultrasonic, frequency 500 kHz
- Typical Minimum Depth 0.08 ft (25 mm)
- Range -5 to +20 ft/s (-1.5 to +6.1 m/s)
- Accuracy (in water with uniform velocity profile, speed of sound = 4850 ft/s, for indicated velocity range) ± 0.1 ft/s from -5 to 5 ft/s (± 0.03 m/s from— 1.5 to +1.5 m/s)
- $\pm 2\%$ of reading from 5 to 20 ft/s (1.5 to 6.1 m/s)

Method Of Insertion:

- 12 inch line does not require confined space entry for installation of ring and transducer.

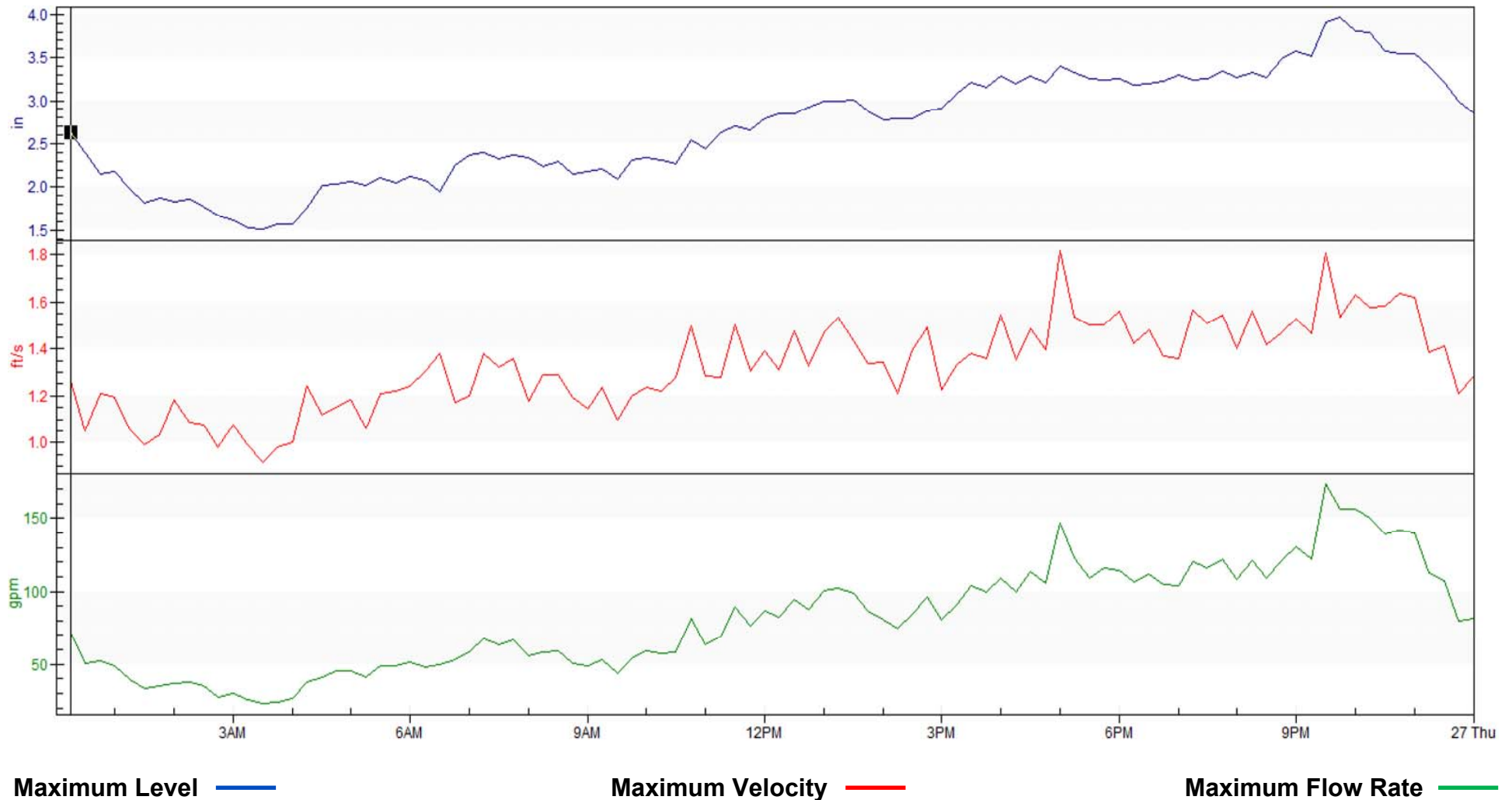


Gold Coast Environmental

Specializing in process instrumentation and calibration.



MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/26/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Wednesday - A.M. 7/26/2023

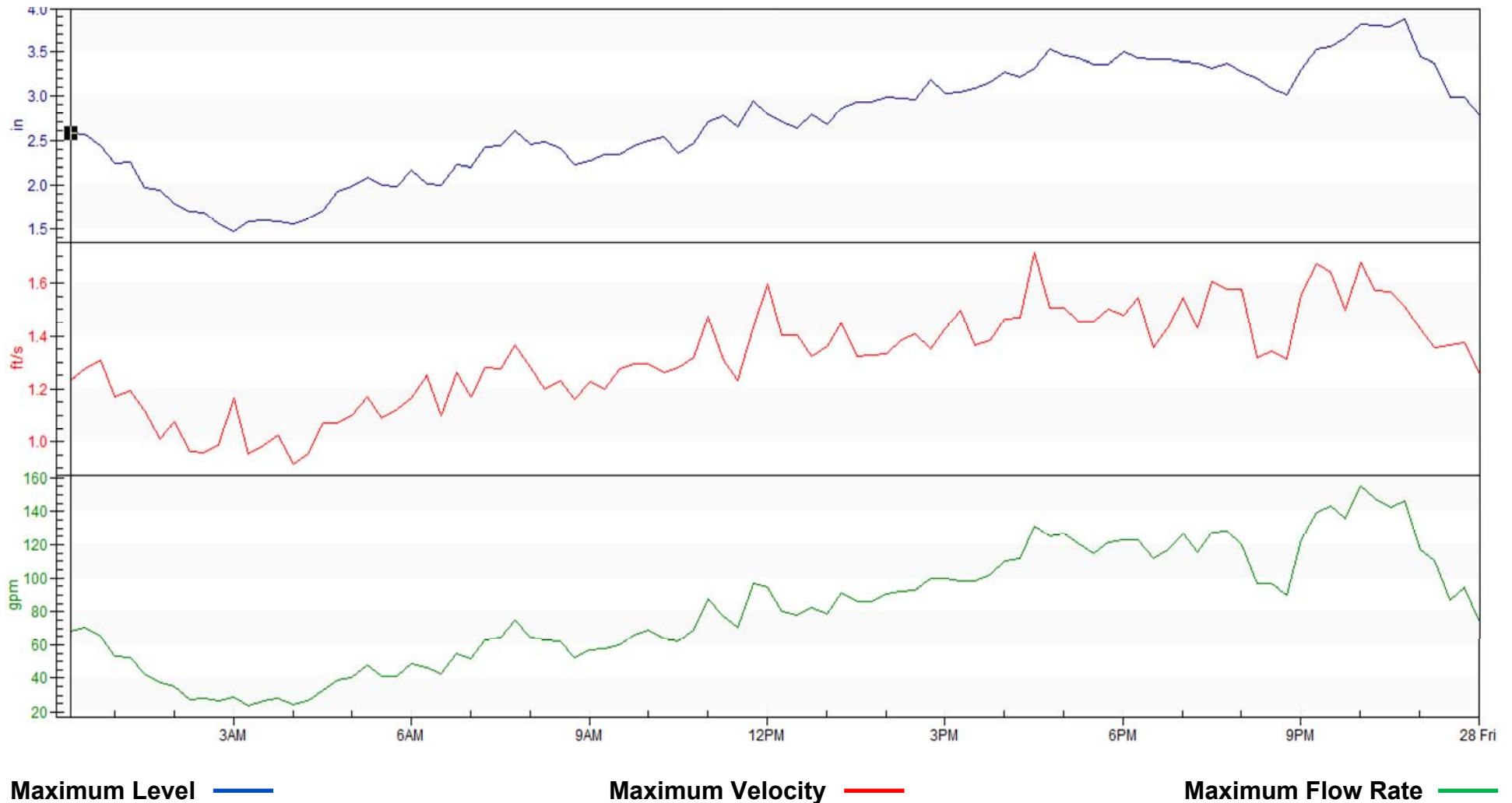
Time	Level	Velocity	Flow
12:15:00 AM	2.632	1.262	72.232
12:30:00 AM	2.39	1.05	50.8
12:45:00 AM	2.153	1.212	52.04
1:00:00 AM	2.174	1.195	48.965
1:15:00 AM	1.978	1.054	39.025
1:30:00 AM	1.822	0.99	33.41
1:45:00 AM	1.875	1.036	35.5
2:00:00 AM	1.83	1.182	37.245
2:15:00 AM	1.864	1.085	37.534
2:30:00 AM	1.778	1.077	35.07
2:45:00 AM	1.668	0.981	27.766
3:00:00 AM	1.611	1.077	29.617
3:15:00 AM	1.526	0.99	25.535
3:30:00 AM	1.509	0.916	23.298
3:45:00 AM	1.562	0.978	24.303
4:00:00 AM	1.572	1	26.754
4:15:00 AM	1.76	1.243	37.639
4:30:00 AM	2.025	1.121	40.756
4:45:00 AM	2.036	1.149	45.501
5:00:00 AM	2.064	1.18	45.226
5:15:00 AM	2.017	1.061	41.073
5:30:00 AM	2.109	1.209	49.082
5:45:00 AM	2.055	1.22	48.877
6:00:00 AM	2.121	1.239	51.823
6:15:00 AM	2.081	1.307	48.055
6:30:00 AM	1.946	1.381	49.852
6:45:00 AM	2.247	1.171	53.353
7:00:00 AM	2.366	1.197	58.64
7:15:00 AM	2.391	1.378	67.795
7:30:00 AM	2.321	1.32	63.162
7:45:00 AM	2.369	1.358	66.916
8:00:00 AM	2.332	1.179	55.991
8:15:00 AM	2.231	1.29	58.276
8:30:00 AM	2.29	1.29	59.349
8:45:00 AM	2.156	1.194	50.322
9:00:00 AM	2.177	1.148	48.613
9:15:00 AM	2.207	1.237	53.103
9:30:00 AM	2.088	1.1	44.016
9:45:00 AM	2.311	1.198	54.329
10:00:00 AM	2.338	1.237	59.604
10:15:00 AM	2.303	1.218	57.399
10:30:00 AM	2.27	1.281	58.416
10:45:00 AM	2.544	1.495	81.539
11:00:00 AM	2.447	1.283	63.181
11:15:00 AM	2.636	1.28	69.902
11:30:00 AM	2.696	1.504	89.093
11:45:00 AM	2.664	1.307	76.104

Wednesday - P.M. 7/26/2023

Time	Level	Velocity	Flow
12:00:00 PM	2.796	1.389	86.692
12:15:00 PM	2.852	1.312	82.514
12:30:00 PM	2.855	1.473	94.673
12:45:00 PM	2.918	1.327	87.966
1:00:00 PM	2.998	1.469	100.706
1:15:00 PM	2.992	1.534	101.846
1:30:00 PM	3.005	1.433	98.988
1:45:00 PM	2.874	1.335	86.304
2:00:00 PM	2.775	1.341	80.908
2:15:00 PM	2.784	1.208	74.928
2:30:00 PM	2.785	1.389	84.037
2:45:00 PM	2.877	1.489	96.28
3:00:00 PM	2.91	1.227	81.007
3:15:00 PM	3.084	1.329	91.012
3:30:00 PM	3.215	1.38	103.928
3:45:00 PM	3.156	1.36	99.878
4:00:00 PM	3.279	1.546	109.247
4:15:00 PM	3.2	1.354	99.639
4:30:00 PM	3.289	1.489	113.705
4:45:00 PM	3.214	1.393	105.764
5:00:00 PM	3.396	1.817	147.212
5:15:00 PM	3.327	1.537	122.436
5:30:00 PM	3.252	1.501	109.385
5:45:00 PM	3.247	1.504	115.808
6:00:00 PM	3.251	1.562	114.5
6:15:00 PM	3.177	1.424	106.41
6:30:00 PM	3.192	1.481	111.371
6:45:00 PM	3.226	1.37	104.543
7:00:00 PM	3.299	1.36	103.822
7:15:00 PM	3.239	1.565	120.116
7:30:00 PM	3.249	1.508	116.057
7:45:00 PM	3.34	1.545	122.19
8:00:00 PM	3.274	1.4	108.019
8:15:00 PM	3.324	1.563	121.142
8:30:00 PM	3.271	1.415	108.816
8:45:00 PM	3.482	1.473	121.352
9:00:00 PM	3.571	1.53	130.631
9:15:00 PM	3.512	1.464	121.72
9:30:00 PM	3.913	1.807	173.348
9:45:00 PM	3.969	1.535	156.191
10:00:00 PM	3.809	1.631	156.448
10:15:00 PM	3.793	1.574	150.539
10:30:00 PM	3.578	1.581	139.467
10:45:00 PM	3.552	1.633	141.645
11:00:00 PM	3.55	1.621	139.678
11:15:00 PM	3.397	1.384	112.621
11:30:00 PM	3.218	1.413	107.524
11:45:00 PM	2.987	1.207	79.942

	Inches	Feet/Sec	GPM
Daily Avg:	2.682	1.327	80.937
Daily Min:	1.509	0.916	23.298
Daily Max:	3.969	1.817	173.348
Peak to Avg:			2.14

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/27/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Thursday - A.M. 7/27/2023

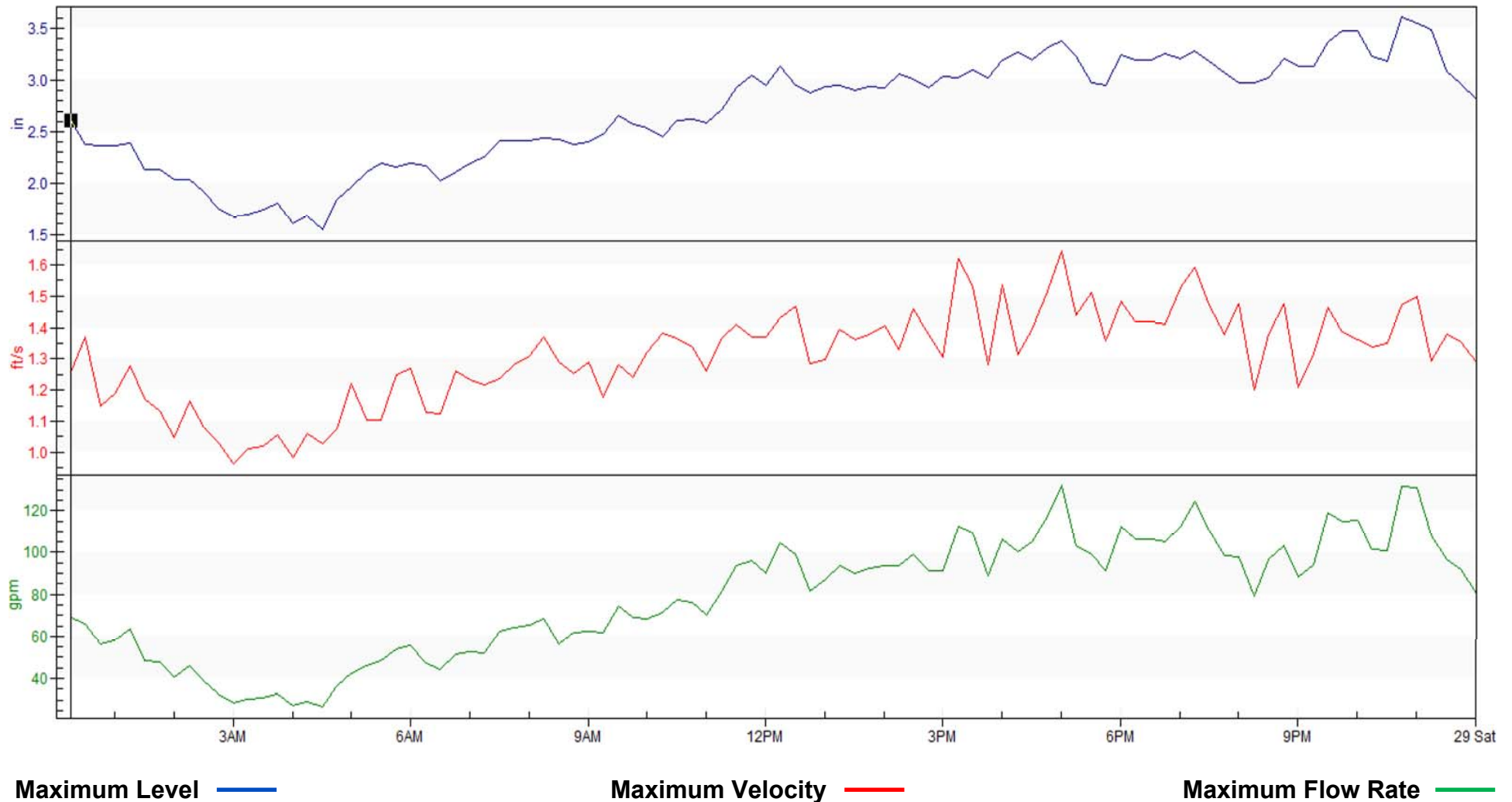
Time	Level	Velocity	Flow
12:00:00 AM	2.855	1.284	81.268
12:15:00 AM	2.578	1.232	68.493
12:30:00 AM	2.562	1.275	70.041
12:45:00 AM	2.433	1.31	65.044
1:00:00 AM	2.245	1.172	53.475
1:15:00 AM	2.256	1.197	52.506
1:30:00 AM	1.971	1.12	42.32
1:45:00 AM	1.934	1.009	37.111
2:00:00 AM	1.781	1.074	35.085
2:15:00 AM	1.706	0.963	27.907
2:30:00 AM	1.681	0.956	28.467
2:45:00 AM	1.559	0.987	26.562
3:00:00 AM	1.472	1.167	28.878
3:15:00 AM	1.583	0.956	24.032
3:30:00 AM	1.596	0.987	27.121
3:45:00 AM	1.591	1.024	28.401
4:00:00 AM	1.564	0.916	24.738
4:15:00 AM	1.616	0.952	27.002
4:30:00 AM	1.718	1.073	33.188
4:45:00 AM	1.924	1.071	39.083
5:00:00 AM	1.978	1.102	40.358
5:15:00 AM	2.082	1.171	47.911
5:30:00 AM	1.99	1.09	41.394
5:45:00 AM	1.978	1.125	40.92
6:00:00 AM	2.166	1.164	48.417
6:15:00 AM	2.01	1.25	46.189
6:30:00 AM	1.994	1.102	42.375
6:45:00 AM	2.231	1.263	54.466
7:00:00 AM	2.199	1.172	51.885
7:15:00 AM	2.421	1.279	63.232
7:30:00 AM	2.433	1.273	64.341
7:45:00 AM	2.606	1.366	75.201
8:00:00 AM	2.458	1.28	64.62
8:15:00 AM	2.481	1.201	63.197
8:30:00 AM	2.412	1.233	62.336
8:45:00 AM	2.22	1.161	52.014
9:00:00 AM	2.264	1.227	56.657
9:15:00 AM	2.331	1.198	57.635
9:30:00 AM	2.341	1.277	60.208
9:45:00 AM	2.432	1.293	66.151
10:00:00 AM	2.5	1.295	68.641
10:15:00 AM	2.537	1.26	63.693
10:30:00 AM	2.349	1.278	62.086
10:45:00 AM	2.466	1.315	68.611
11:00:00 AM	2.709	1.473	87.883
11:15:00 AM	2.771	1.307	77.263
11:30:00 AM	2.646	1.231	70.649
11:45:00 AM	2.951	1.432	96.439

Thursday - P.M. 7/27/2023

Time	Level	Velocity	Flow
12:00:00 PM	2.784	1.597	94.323
12:15:00 PM	2.712	1.403	80.147
12:30:00 PM	2.629	1.404	77.603
12:45:00 PM	2.787	1.321	82.051
1:00:00 PM	2.674	1.359	78.507
1:15:00 PM	2.864	1.452	91.519
1:30:00 PM	2.939	1.32	85.805
1:45:00 PM	2.936	1.329	86.231
2:00:00 PM	2.983	1.333	90.829
2:15:00 PM	2.98	1.386	92.457
2:30:00 PM	2.958	1.406	92.988
2:45:00 PM	3.195	1.352	99.646
3:00:00 PM	3.028	1.427	99.639
3:15:00 PM	3.047	1.498	98.123
3:30:00 PM	3.095	1.363	98.141
3:45:00 PM	3.153	1.385	101.682
4:00:00 PM	3.267	1.466	110.269
4:15:00 PM	3.213	1.467	111.323
4:30:00 PM	3.313	1.715	131.449
4:45:00 PM	3.524	1.507	125.206
5:00:00 PM	3.455	1.506	126.528
5:15:00 PM	3.429	1.456	120.996
5:30:00 PM	3.353	1.454	114.814
5:45:00 PM	3.363	1.501	121.461
6:00:00 PM	3.5	1.48	123.28
6:15:00 PM	3.423	1.545	122.807
6:30:00 PM	3.414	1.356	112.046
6:45:00 PM	3.413	1.429	117.163
7:00:00 PM	3.391	1.544	126.376
7:15:00 PM	3.376	1.432	115.292
7:30:00 PM	3.321	1.604	127.464
7:45:00 PM	3.371	1.576	127.923
8:00:00 PM	3.275	1.579	120.202
8:15:00 PM	3.197	1.316	96.469
8:30:00 PM	3.095	1.34	96.5
8:45:00 PM	3.022	1.311	89.814
9:00:00 PM	3.3	1.557	122.662
9:15:00 PM	3.53	1.67	139.31
9:30:00 PM	3.554	1.64	143.323
9:45:00 PM	3.658	1.495	135.916
10:00:00 PM	3.816	1.677	155.051
10:15:00 PM	3.803	1.571	147.437
10:30:00 PM	3.781	1.57	142.685
10:45:00 PM	3.869	1.511	146.248
11:00:00 PM	3.438	1.428	117.144
11:15:00 PM	3.377	1.356	110.305
11:30:00 PM	2.992	1.367	87.121
11:45:00 PM	2.988	1.375	94.23

	Inches	Feet/Sec	GPM
Daily Avg:	2.709	1.320	81.713
Daily Min:	1.472	0.916	24.032
Daily Max:	3.869	1.715	155.051
Peak to Avg:			1.90

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/28/2023, 12:00 a.m. - 12:00 p.m.**

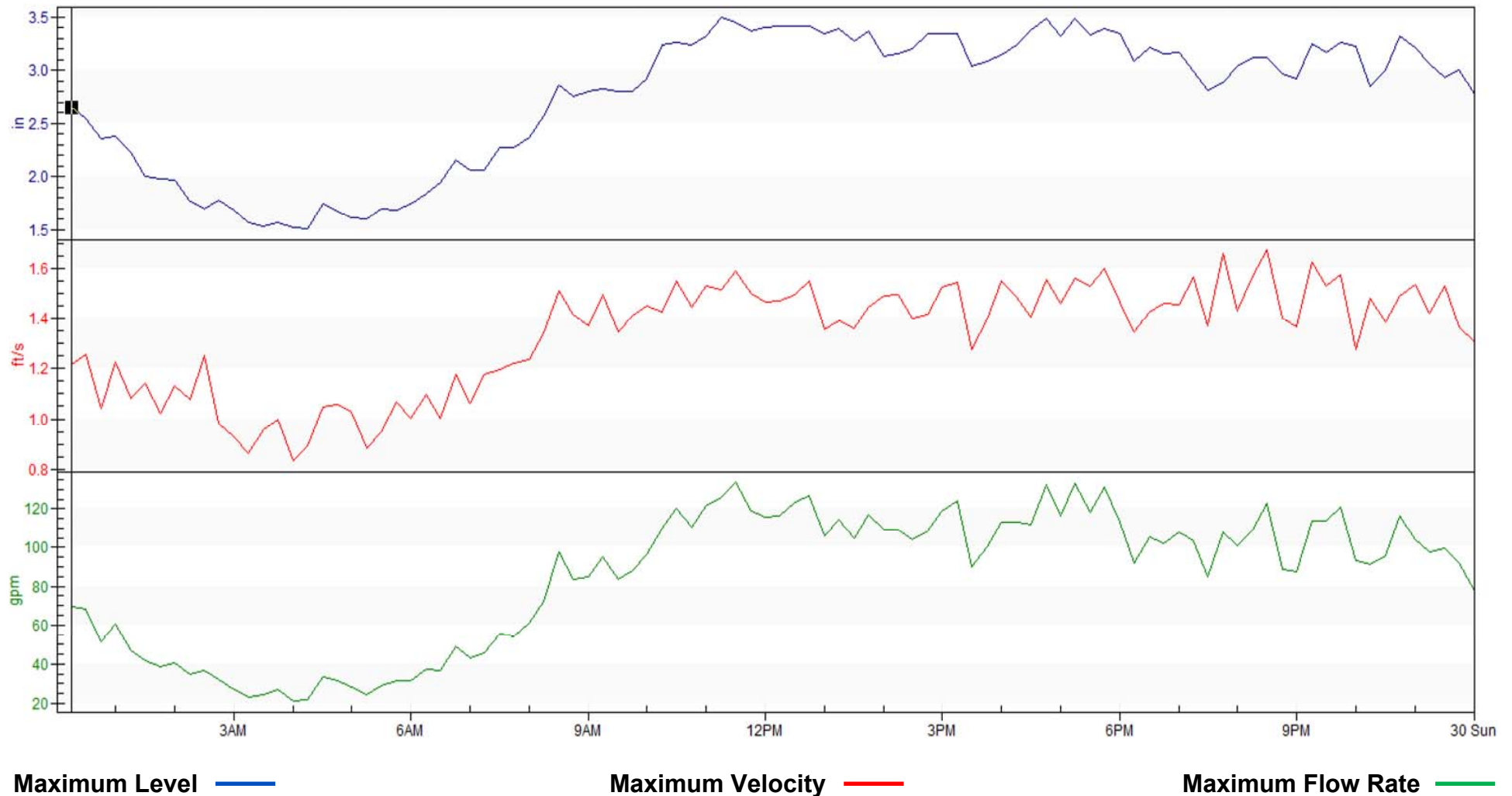
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Friday - A.M. 7/28/2023

Friday - P.M. 7/28/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	2.78	1.254	73.276	12:00:00 PM	2.953	1.37	90.147
12:15:00 AM	2.612	1.257	68.996	12:15:00 PM	3.134	1.43	104.453
12:30:00 AM	2.38	1.37	66.037	12:30:00 PM	2.952	1.468	98.916
12:45:00 AM	2.362	1.149	56.347	12:45:00 PM	2.877	1.287	81.807
1:00:00 AM	2.36	1.19	58.28	1:00:00 PM	2.94	1.296	86.829
1:15:00 AM	2.387	1.28	63.706	1:15:00 PM	2.949	1.396	93.902
1:30:00 AM	2.125	1.173	48.75	1:30:00 PM	2.905	1.364	89.854
1:45:00 AM	2.132	1.134	48.033	1:45:00 PM	2.943	1.38	92.546
2:00:00 AM	2.038	1.046	40.777	2:00:00 PM	2.932	1.406	93.801
2:15:00 AM	2.037	1.166	46.24	2:15:00 PM	3.062	1.331	93.411
2:30:00 AM	1.907	1.082	39.017	2:30:00 PM	3.014	1.458	99.157
2:45:00 AM	1.749	1.032	32.804	2:45:00 PM	2.924	1.377	91.52
3:00:00 AM	1.664	0.963	28.501	3:00:00 PM	3.034	1.306	91.493
3:15:00 AM	1.693	1.011	30.682	3:15:00 PM	3.02	1.619	112.615
3:30:00 AM	1.737	1.022	31.251	3:30:00 PM	3.103	1.533	109.491
3:45:00 AM	1.795	1.057	33.048	3:45:00 PM	3.021	1.281	88.641
4:00:00 AM	1.609	0.982	27.649	4:00:00 PM	3.193	1.537	106.573
4:15:00 AM	1.679	1.059	28.902	4:15:00 PM	3.263	1.315	100.472
4:30:00 AM	1.542	1.028	26.93	4:30:00 PM	3.201	1.394	105.1
4:45:00 AM	1.834	1.075	36.638	4:45:00 PM	3.313	1.517	117.047
5:00:00 AM	1.964	1.223	42.368	5:00:00 PM	3.377	1.645	132.092
5:15:00 AM	2.11	1.106	46.139	5:15:00 PM	3.234	1.44	103.078
5:30:00 AM	2.198	1.103	48.783	5:30:00 PM	2.974	1.512	99.084
5:45:00 AM	2.158	1.248	53.798	5:45:00 PM	2.948	1.359	91.395
6:00:00 AM	2.192	1.269	55.923	6:00:00 PM	3.246	1.482	112.543
6:15:00 AM	2.17	1.13	47.462	6:15:00 PM	3.192	1.418	106.619
6:30:00 AM	2.017	1.125	44.006	6:30:00 PM	3.195	1.417	106.614
6:45:00 AM	2.111	1.263	51.217	6:45:00 PM	3.256	1.409	104.954
7:00:00 AM	2.19	1.233	52.425	7:00:00 PM	3.214	1.527	112.396
7:15:00 AM	2.258	1.219	52.351	7:15:00 PM	3.283	1.591	124.469
7:30:00 AM	2.416	1.237	62.128	7:30:00 PM	3.185	1.473	110.463
7:45:00 AM	2.418	1.282	64.302	7:45:00 PM	3.08	1.379	98.574
8:00:00 AM	2.414	1.309	65.221	8:00:00 PM	2.975	1.476	97.797
8:15:00 AM	2.438	1.371	68.637	8:15:00 PM	2.98	1.2	79.247
8:30:00 AM	2.426	1.291	56.436	8:30:00 PM	3.03	1.38	96.469
8:45:00 AM	2.374	1.253	61.75	8:45:00 PM	3.214	1.474	103.531
9:00:00 AM	2.395	1.289	62.133	9:00:00 PM	3.129	1.208	88.328
9:15:00 AM	2.476	1.177	61.769	9:15:00 PM	3.13	1.318	94.526
9:30:00 AM	2.653	1.282	74.248	9:30:00 PM	3.372	1.465	118.906
9:45:00 AM	2.571	1.243	68.792	9:45:00 PM	3.476	1.386	114.644
10:00:00 AM	2.538	1.322	68.358	10:00:00 PM	3.479	1.361	115.439
10:15:00 AM	2.448	1.383	71.405	10:15:00 PM	3.227	1.337	101.662
10:30:00 AM	2.607	1.367	77.214	10:30:00 PM	3.188	1.349	100.613
10:45:00 AM	2.616	1.338	75.953	10:45:00 PM	3.613	1.472	131.54
11:00:00 AM	2.578	1.261	70.117	11:00:00 PM	3.553	1.498	130.815
11:15:00 AM	2.715	1.366	81.75	11:15:00 PM	3.495	1.294	107.895
11:30:00 AM	2.925	1.412	93.395	11:30:00 PM	3.086	1.38	96.587
11:45:00 AM	3.055	1.371	96.047	11:45:00 PM	2.961	1.353	91.574
				Inches	Feet/Sec	GPM	
Daily Avg:				2.694	1.308	79.014	
Daily Min:				1.542	0.963	26.93	
Daily Max:				3.613	1.645	132.092	
Peak to Avg:						1.67	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/29/2023, 12:00 a.m. - 12:00 p.m.**

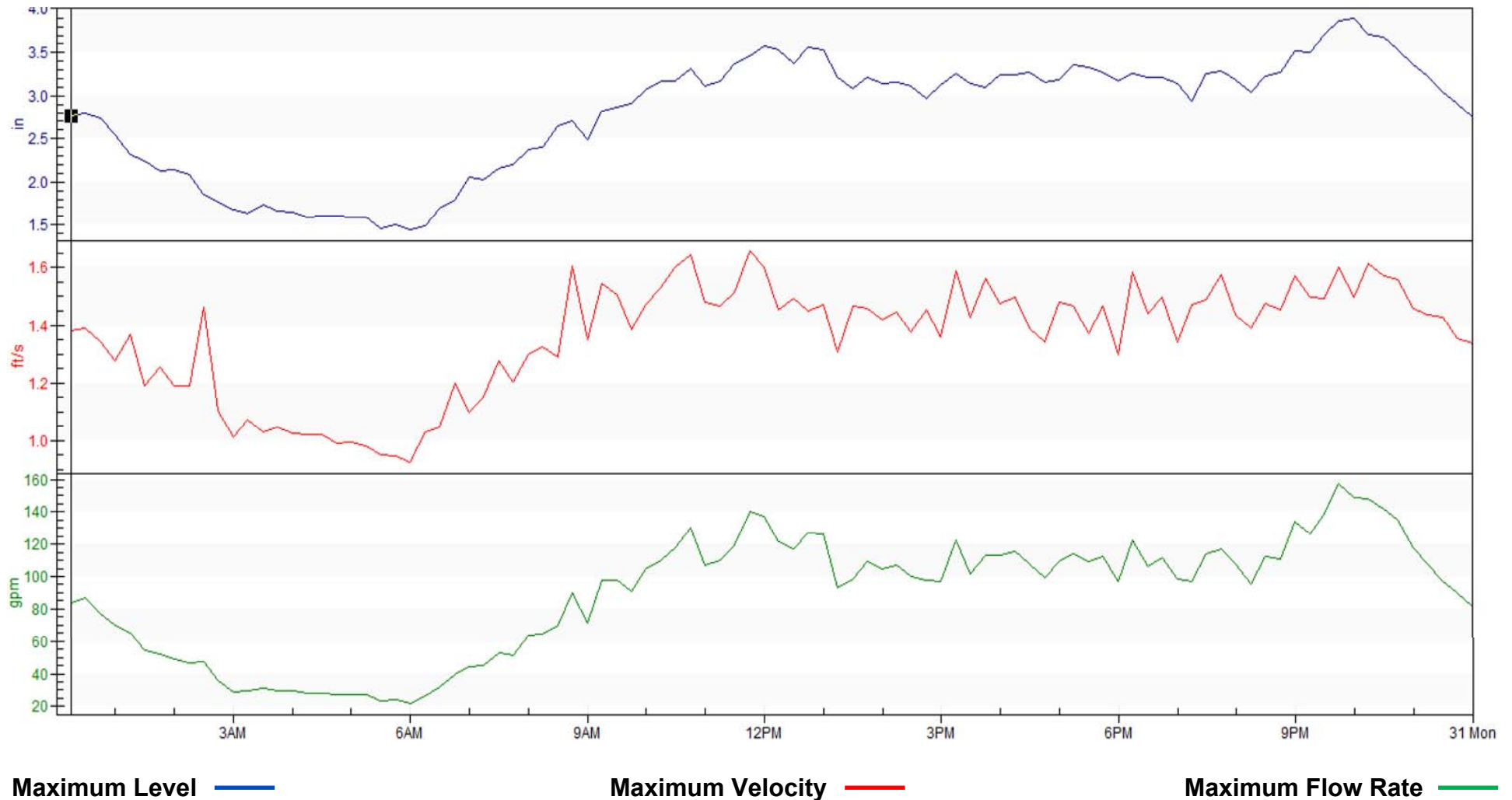
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Saturday - A.M. 7/29/2023

Saturday - P.M. 7/29/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	2.821	1.29	80.205	12:00:00 PM	3.405	1.468	115.637
12:15:00 AM	2.652	1.216	69.588	12:15:00 PM	3.42	1.469	116.3
12:30:00 AM	2.547	1.255	68.205	12:30:00 PM	3.412	1.497	123.505
12:45:00 AM	2.362	1.044	51.206	12:45:00 PM	3.415	1.55	126.898
1:00:00 AM	2.381	1.228	60.77	1:00:00 PM	3.352	1.359	105.877
1:15:00 AM	2.228	1.085	47.167	1:15:00 PM	3.397	1.394	114.275
1:30:00 AM	1.998	1.145	41.993	1:30:00 PM	3.28	1.359	104.934
1:45:00 AM	1.982	1.023	38.747	1:45:00 PM	3.366	1.447	117.192
2:00:00 AM	1.972	1.13	40.679	2:00:00 PM	3.141	1.49	109.443
2:15:00 AM	1.772	1.08	34.979	2:15:00 PM	3.163	1.495	109.565
2:30:00 AM	1.691	1.254	36.976	2:30:00 PM	3.208	1.4	104.04
2:45:00 AM	1.778	0.984	32.038	2:45:00 PM	3.347	1.416	108.654
3:00:00 AM	1.682	0.926	27.15	3:00:00 PM	3.348	1.527	119.008
3:15:00 AM	1.568	0.862	23.387	3:15:00 PM	3.347	1.544	124.076
3:30:00 AM	1.533	0.959	24.753	3:30:00 PM	3.045	1.276	89.769
3:45:00 AM	1.573	0.999	27.216	3:45:00 PM	3.091	1.396	100.311
4:00:00 AM	1.518	0.833	21.431	4:00:00 PM	3.15	1.552	113.394
4:15:00 AM	1.508	0.895	21.97	4:15:00 PM	3.246	1.485	113.168
4:30:00 AM	1.748	1.047	33.281	4:30:00 PM	3.384	1.406	112.064
4:45:00 AM	1.677	1.057	31.28	4:45:00 PM	3.49	1.555	132.473
5:00:00 AM	1.616	1.028	28.596	5:00:00 PM	3.323	1.46	116.106
5:15:00 AM	1.605	0.882	24.755	5:15:00 PM	3.484	1.562	132.766
5:30:00 AM	1.697	0.949	28.904	5:30:00 PM	3.34	1.532	118.548
5:45:00 AM	1.684	1.068	31.841	5:45:00 PM	3.398	1.598	131.204
6:00:00 AM	1.74	1.001	31.593	6:00:00 PM	3.345	1.468	113.377
6:15:00 AM	1.842	1.098	37.651	6:15:00 PM	3.089	1.345	92.024
6:30:00 AM	1.944	1.002	36.487	6:30:00 PM	3.218	1.427	105.397
6:45:00 AM	2.157	1.176	49.149	6:45:00 PM	3.159	1.461	102.462
7:00:00 AM	2.068	1.061	42.978	7:00:00 PM	3.167	1.455	108.177
7:15:00 AM	2.06	1.178	45.432	7:15:00 PM	2.989	1.568	103.765
7:30:00 AM	2.275	1.195	55.568	7:30:00 PM	2.813	1.37	84.702
7:45:00 AM	2.276	1.222	53.952	7:45:00 PM	2.882	1.662	108.272
8:00:00 AM	2.373	1.235	61.024	8:00:00 PM	3.042	1.433	100.7
8:15:00 AM	2.57	1.34	72.143	8:15:00 PM	3.128	1.573	109.099
8:30:00 AM	2.864	1.511	97.563	8:30:00 PM	3.127	1.676	122.443
8:45:00 AM	2.757	1.418	83.874	8:45:00 PM	2.97	1.4	88.59
9:00:00 AM	2.81	1.372	84.925	9:00:00 PM	2.917	1.365	87.346
9:15:00 AM	2.832	1.495	94.934	9:15:00 PM	3.254	1.627	113.929
9:30:00 AM	2.801	1.347	83.898	9:30:00 PM	3.172	1.529	113.957
9:45:00 AM	2.803	1.413	88.15	9:45:00 PM	3.262	1.575	120.863
10:00:00 AM	2.923	1.453	96.493	10:00:00 PM	3.235	1.277	93.496
10:15:00 AM	3.245	1.426	109.761	10:15:00 PM	2.851	1.479	91.28
10:30:00 AM	3.264	1.549	120.23	10:30:00 PM	3.004	1.387	95.766
10:45:00 AM	3.237	1.444	110.768	10:45:00 PM	3.325	1.49	116.293
11:00:00 AM	3.321	1.533	121.778	11:00:00 PM	3.213	1.534	104.354
11:15:00 AM	3.501	1.515	126.065	11:15:00 PM	3.069	1.421	97.408
11:30:00 AM	3.45	1.592	133.526	11:30:00 PM	2.932	1.532	99.559
11:45:00 AM	3.375	1.504	118.877	11:45:00 PM	3.003	1.367	91.698
				Inches	Feet/Sec	GPM	
Daily Avg:				2.747	1.334	84.504	
Daily Min:				1.508	0.833	21.431	
Daily Max:				3.501	1.676	133.526	
Peak to Avg:						1.58	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/30/2023, 12:00 a.m. - 12:00 p.m.**

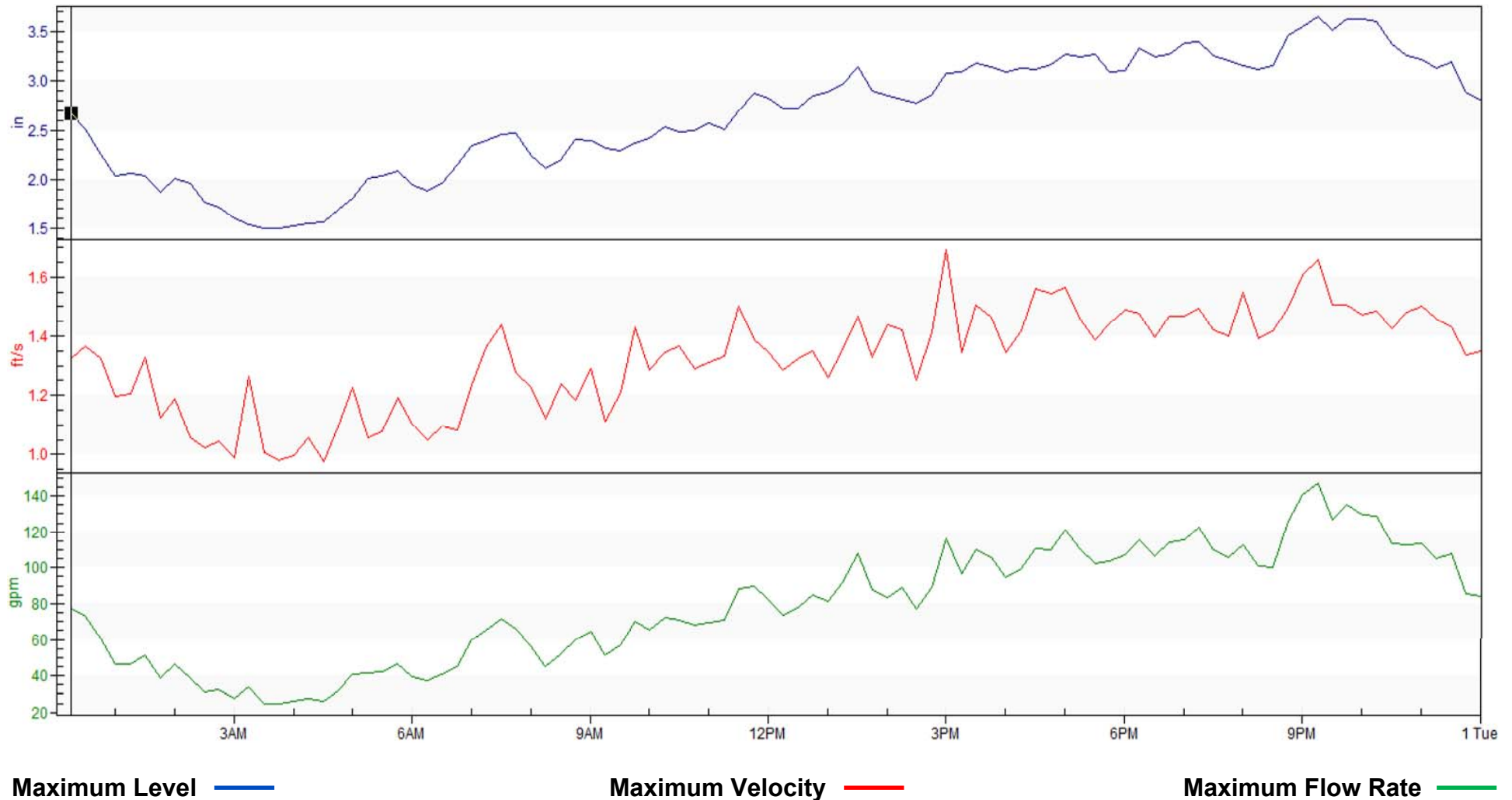
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Sunday - A.M. 7/30/2023

Sunday - P.M. 7/30/2023

Time	Level	Velocity	Flow		Time	Level	Velocity	Flow																				
12:00:00 AM	2.775	1.306	77.489		12:00:00 PM	3.583	1.6	136.966																				
12:15:00 AM	2.769	1.381	83.511		12:15:00 PM	3.529	1.454	121.536																				
12:30:00 AM	2.8	1.389	86.61		12:30:00 PM	3.376	1.494	116.678																				
12:45:00 AM	2.73	1.343	77.087		12:45:00 PM	3.566	1.451	127.362																				
1:00:00 AM	2.547	1.276	69.728		1:00:00 PM	3.527	1.471	126.517																				
1:15:00 AM	2.312	1.368	65.1		1:15:00 PM	3.219	1.307	93.058																				
1:30:00 AM	2.239	1.19	54.07		1:30:00 PM	3.079	1.468	98.816																				
1:45:00 AM	2.129	1.255	51.878		1:45:00 PM	3.219	1.46	109.298																				
2:00:00 AM	2.135	1.191	48.701		2:00:00 PM	3.142	1.421	104.522																				
2:15:00 AM	2.089	1.191	46.835		2:15:00 PM	3.159	1.445	107.038																				
2:30:00 AM	1.853	1.465	47.396		2:30:00 PM	3.109	1.375	99.648																				
2:45:00 AM	1.758	1.104	35.372		2:45:00 PM	2.973	1.455	97.414																				
3:00:00 AM	1.672	1.014	29.008		3:00:00 PM	3.124	1.358	97.232																				
3:15:00 AM	1.628	1.073	29.806		3:15:00 PM	3.254	1.59	122.826																				
3:30:00 AM	1.733	1.031	31.186		3:30:00 PM	3.138	1.429	101.941																				
3:45:00 AM	1.67	1.046	29.391		3:45:00 PM	3.099	1.565	112.851																				
4:00:00 AM	1.651	1.023	29.907		4:00:00 PM	3.24	1.477	113.446																				
4:15:00 AM	1.588	1.019	27.683		4:15:00 PM	3.248	1.498	115.403																				
4:30:00 AM	1.609	1.018	27.982		4:30:00 PM	3.269	1.39	108.103																				
4:45:00 AM	1.611	0.99	27.372		4:45:00 PM	3.154	1.344	99.352																				
5:00:00 AM	1.589	0.995	27.535		5:00:00 PM	3.179	1.482	109.183																				
5:15:00 AM	1.588	0.979	27.054		5:15:00 PM	3.354	1.467	113.636																				
5:30:00 AM	1.456	0.953	23.208		5:30:00 PM	3.332	1.371	109.471																				
5:45:00 AM	1.496	0.946	23.971		5:45:00 PM	3.278	1.467	112.454																				
6:00:00 AM	1.445	0.925	21.985		6:00:00 PM	3.166	1.299	96.535																				
6:15:00 AM	1.496	1.031	26.106		6:15:00 PM	3.254	1.584	122.25																				
6:30:00 AM	1.692	1.045	31.675		6:30:00 PM	3.21	1.442	106.072																				
6:45:00 AM	1.799	1.197	39.67		6:45:00 PM	3.217	1.498	111.715																				
7:00:00 AM	2.05	1.101	44.053		7:00:00 PM	3.148	1.343	98.2																				
7:15:00 AM	2.023	1.149	45.118		7:15:00 PM	2.935	1.47	97.15																				
7:30:00 AM	2.162	1.275	52.427		7:30:00 PM	3.252	1.487	113.916																				
7:45:00 AM	2.201	1.202	51.007		7:45:00 PM	3.293	1.576	116.723																				
8:00:00 AM	2.371	1.296	63.921		8:00:00 PM	3.191	1.439	108.045																				
8:15:00 AM	2.404	1.325	64.55		8:15:00 PM	3.036	1.391	95.491																				
8:30:00 AM	2.647	1.288	69.744		8:30:00 PM	3.226	1.478	112.239																				
8:45:00 AM	2.709	1.607	89.831		8:45:00 PM	3.28	1.456	110.609																				
9:00:00 AM	2.495	1.35	71.651		9:00:00 PM	3.519	1.569	134.316																				
9:15:00 AM	2.823	1.543	97.602		9:15:00 PM	3.504	1.499	126.616																				
9:30:00 AM	2.87	1.505	97.458		9:30:00 PM	3.709	1.496	138.385																				
9:45:00 AM	2.903	1.383	91.012		9:45:00 PM	3.865	1.602	157.14																				
10:00:00 AM	3.077	1.471	105.046		10:00:00 PM	3.897	1.499	148.789																				
10:15:00 AM	3.166	1.531	110.153		10:15:00 PM	3.711	1.615	148.14																				
10:30:00 AM	3.173	1.6	117.551		10:30:00 PM	3.683	1.57	141.914																				
10:45:00 AM	3.318	1.644	130.521		10:45:00 PM	3.528	1.559	134.562																				
11:00:00 AM	3.111	1.482	106.926		11:00:00 PM	3.356	1.46	117.773																				
11:15:00 AM	3.178	1.469	109.822		11:15:00 PM	3.225	1.437	107.437																				
11:30:00 AM	3.378	1.514	119.743		11:30:00 PM	3.047	1.427	97.105																				
11:45:00 AM	3.467	1.659	139.977		11:45:00 PM	2.916	1.355	89.701																				
					<table><tr><th></th><th>Inches</th><th>Feet/Sec</th><th>GPM</th></tr><tr><td>Daily Avg:</td><td>2.789</td><td>1.360</td><td>88.248</td></tr><tr><td>Daily Min:</td><td>1.445</td><td>0.925</td><td>21.985</td></tr><tr><td>Daily Max:</td><td>3.897</td><td>1.659</td><td>157.14</td></tr><tr><td>Peak to Avg:</td><td></td><td></td><td>1.78</td></tr></table>					Inches	Feet/Sec	GPM	Daily Avg:	2.789	1.360	88.248	Daily Min:	1.445	0.925	21.985	Daily Max:	3.897	1.659	157.14	Peak to Avg:			1.78
	Inches	Feet/Sec	GPM																									
Daily Avg:	2.789	1.360	88.248																									
Daily Min:	1.445	0.925	21.985																									
Daily Max:	3.897	1.659	157.14																									
Peak to Avg:			1.78																									

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **7/31/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Monday - A.M. 7/31/2023

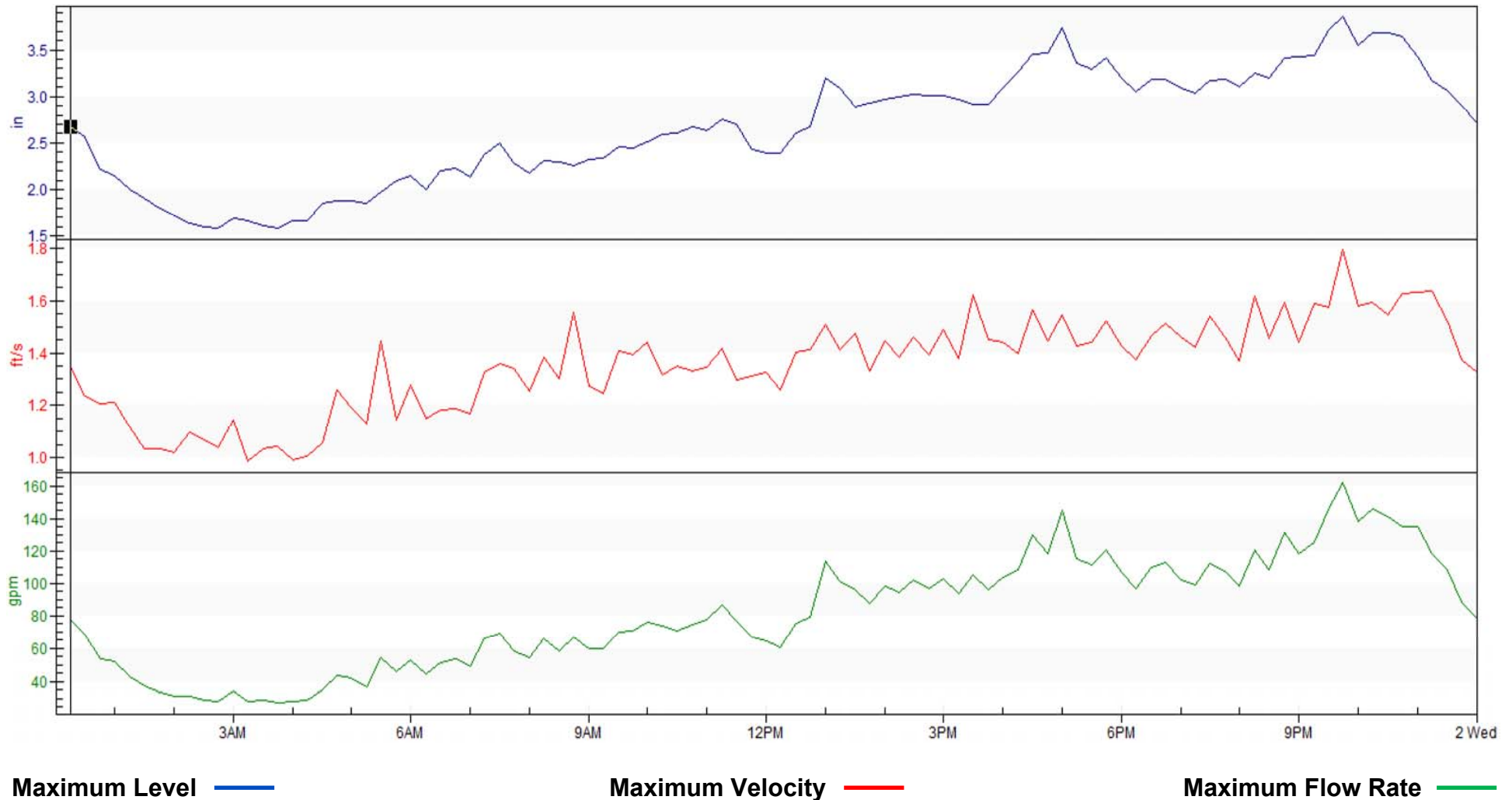
Time	Level	Velocity	Velocity
12:10:00 AM	2.751	1.339	81.628
12:15:00 AM	2.673	1.323	76.891
12:30:00 AM	2.51	1.368	73.226
12:45:00 AM	2.246	1.325	60.496
1:00:00 AM	2.034	1.196	46.644
1:15:00 AM	2.057	1.207	46.611
1:30:00 AM	2.035	1.326	50.963
1:45:00 AM	1.876	1.126	38.799
2:00:00 AM	2.008	1.189	46.175
2:15:00 AM	1.96	1.058	38.544
2:30:00 AM	1.763	1.021	31.155
2:45:00 AM	1.722	1.045	32.298
3:00:00 AM	1.609	0.989	27.545
3:15:00 AM	1.541	1.265	33.478
3:30:00 AM	1.503	1.005	25.01
3:45:00 AM	1.501	0.98	24.872
4:00:00 AM	1.526	0.996	25.981
4:15:00 AM	1.554	1.058	27.466
4:30:00 AM	1.569	0.976	26.317
4:45:00 AM	1.691	1.095	31.577
5:00:00 AM	1.807	1.225	40.866
5:15:00 AM	2.015	1.056	41.234
5:30:00 AM	2.03	1.078	42.46
5:45:00 AM	2.09	1.193	46.735
6:00:00 AM	1.953	1.103	39.737
6:15:00 AM	1.888	1.048	37.263
6:30:00 AM	1.962	1.094	40.681
6:45:00 AM	2.146	1.084	44.965
7:00:00 AM	2.337	1.233	59.559
7:15:00 AM	2.389	1.361	65.076
7:30:00 AM	2.452	1.439	71.707
7:45:00 AM	2.463	1.279	65.798
8:00:00 AM	2.244	1.226	55.879
8:15:00 AM	2.113	1.121	44.754
8:30:00 AM	2.206	1.239	51.744
8:45:00 AM	2.399	1.185	59.415
9:00:00 AM	2.393	1.29	64.456
9:15:00 AM	2.316	1.114	51.24
9:30:00 AM	2.288	1.211	56.762
9:45:00 AM	2.363	1.429	70.114
10:00:00 AM	2.423	1.286	65.431
10:15:00 AM	2.528	1.343	72.606
10:30:00 AM	2.481	1.365	71.012
10:45:00 AM	2.494	1.292	68.019
11:00:00 AM	2.566	1.313	69.301
11:15:00 AM	2.506	1.332	71.139
11:30:00 AM	2.697	1.5	88.242
11:45:00 AM	2.872	1.386	89.832

Monday - P.M. 7/31/2023

Time	Level	Velocity	Flow
12:00:00 PM	2.822	1.346	81.874
12:15:00 PM	2.72	1.285	73.595
12:30:00 PM	2.718	1.325	78.154
12:45:00 PM	2.849	1.348	84.891
1:00:00 PM	2.894	1.262	81.317
1:15:00 PM	2.968	1.355	91.8
1:30:00 PM	3.142	1.468	107.963
1:45:00 PM	2.908	1.329	87.373
2:00:00 PM	2.846	1.438	83.438
2:15:00 PM	2.808	1.422	89.244
2:30:00 PM	2.776	1.25	77.226
2:45:00 PM	2.863	1.411	88.847
3:00:00 PM	3.081	1.692	116.111
3:15:00 PM	3.097	1.344	96.47
3:30:00 PM	3.178	1.505	109.709
3:45:00 PM	3.146	1.464	105.971
4:00:00 PM	3.09	1.345	94.376
4:15:00 PM	3.136	1.417	99.213
4:30:00 PM	3.117	1.56	110.875
4:45:00 PM	3.171	1.545	110.153
5:00:00 PM	3.276	1.566	121.039
5:15:00 PM	3.249	1.461	110.97
5:30:00 PM	3.269	1.387	102.434
5:45:00 PM	3.094	1.444	103.931
6:00:00 PM	3.101	1.487	107.404
6:15:00 PM	3.335	1.474	115.553
6:30:00 PM	3.239	1.396	106.371
6:45:00 PM	3.269	1.469	114.232
7:00:00 PM	3.385	1.466	115.517
7:15:00 PM	3.401	1.492	122.624
7:30:00 PM	3.263	1.419	110.064
7:45:00 PM	3.21	1.4	106.084
8:00:00 PM	3.155	1.546	112.801
8:15:00 PM	3.12	1.39	101.237
8:30:00 PM	3.15	1.417	100.566
8:45:00 PM	3.461	1.496	125.945
9:00:00 PM	3.554	1.608	140.513
9:15:00 PM	3.653	1.659	146.942
9:30:00 PM	3.515	1.507	127.162
9:45:00 PM	3.624	1.504	134.987
10:00:00 PM	3.629	1.47	129.618
10:15:00 PM	3.601	1.483	128.715
10:30:00 PM	3.367	1.427	113.558
10:45:00 PM	3.263	1.481	112.855
11:00:00 PM	3.218	1.5	113.702
11:15:00 PM	3.126	1.461	105.328
11:30:00 PM	3.199	1.429	107.816
11:45:00 PM	2.886	1.334	85.78

	Inches	Feet/Sec	GPM
Daily Avg:	2.650	1.323	78.973
Daily Min:	1.501	0.976	24.872
Daily Max:	3.653	1.692	146.942
Peak to Avg:			1.86

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/1/2023, 12:00 a.m. - 12:00 p.m.**

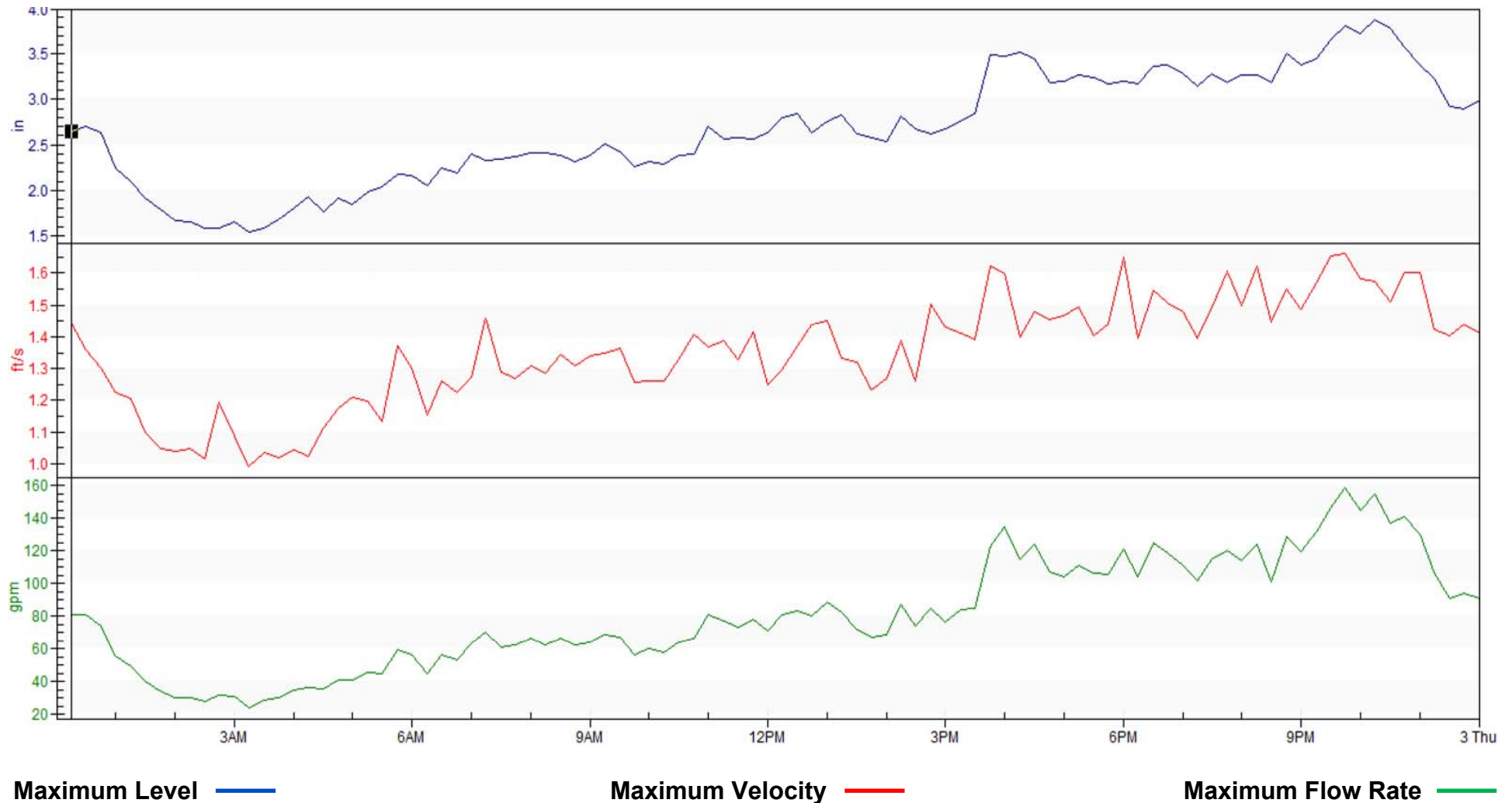
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Tuesday- A.M. 8/1/2023

Tuesday- P.M. 8/1/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	2.796	1.347	84.04	12:00:00 PM	2.391	1.326	64.376
12:15:00 AM	2.677	1.345	77.199	12:15:00 PM	2.395	1.261	60.88
12:30:00 AM	2.567	1.234	68.18	12:30:00 PM	2.6	1.4	75.242
12:45:00 AM	2.215	1.207	53.308	12:45:00 PM	2.678	1.413	79.238
1:00:00 AM	2.15	1.209	51.819	1:00:00 PM	3.198	1.507	113.585
1:15:00 AM	1.998	1.113	42.913	1:15:00 PM	3.085	1.413	101.309
1:30:00 AM	1.907	1.034	37.216	1:30:00 PM	2.888	1.475	96.045
1:45:00 AM	1.803	1.035	33.421	1:45:00 PM	2.93	1.33	87.378
2:00:00 AM	1.715	1.021	31.57	2:00:00 PM	2.967	1.444	97.994
2:15:00 AM	1.63	1.094	31.395	2:15:00 PM	2.992	1.382	94.564
2:30:00 AM	1.589	1.065	28.702	2:30:00 PM	3.024	1.461	101.813
2:45:00 AM	1.582	1.036	28.03	2:45:00 PM	3.008	1.394	96.446
3:00:00 AM	1.693	1.143	34.581	3:00:00 PM	3.003	1.49	102.569
3:15:00 AM	1.659	0.985	28.485	3:15:00 PM	2.971	1.38	93.396
3:30:00 AM	1.614	1.033	29.237	3:30:00 PM	2.92	1.625	105.169
3:45:00 AM	1.581	1.043	27.686	3:45:00 PM	2.911	1.449	95.74
4:00:00 AM	1.662	0.989	28.376	4:00:00 PM	3.09	1.44	103.484
4:15:00 AM	1.66	1.005	28.903	4:15:00 PM	3.271	1.398	108.569
4:30:00 AM	1.847	1.055	35.43	4:30:00 PM	3.45	1.565	129.566
4:45:00 AM	1.877	1.259	43.637	4:45:00 PM	3.473	1.447	117.873
5:00:00 AM	1.879	1.191	41.817	5:00:00 PM	3.739	1.548	145.096
5:15:00 AM	1.846	1.129	36.496	5:15:00 PM	3.359	1.424	115.03
5:30:00 AM	1.971	1.446	54.653	5:30:00 PM	3.289	1.44	111.37
5:45:00 AM	2.095	1.144	46.291	5:45:00 PM	3.409	1.523	120.839
6:00:00 AM	2.145	1.277	52.772	6:00:00 PM	3.202	1.428	106.662
6:15:00 AM	2.005	1.149	44.516	6:15:00 PM	3.051	1.374	97.005
6:30:00 AM	2.204	1.182	51.033	6:30:00 PM	3.185	1.464	109.794
6:45:00 AM	2.233	1.186	53.669	6:45:00 PM	3.179	1.511	112.994
7:00:00 AM	2.131	1.167	49.388	7:00:00 PM	3.089	1.462	101.719
7:15:00 AM	2.379	1.325	65.674	7:15:00 PM	3.038	1.423	99.298
7:30:00 AM	2.498	1.358	68.676	7:30:00 PM	3.167	1.54	112.222
7:45:00 AM	2.285	1.338	58.34	7:45:00 PM	3.188	1.461	107.562
8:00:00 AM	2.175	1.254	54.237	8:00:00 PM	3.107	1.367	97.952
8:15:00 AM	2.315	1.383	65.92	8:15:00 PM	3.248	1.617	120.512
8:30:00 AM	2.301	1.304	58.582	8:30:00 PM	3.2	1.455	108.506
8:45:00 AM	2.255	1.557	66.589	8:45:00 PM	3.409	1.592	131.284
9:00:00 AM	2.325	1.273	60.078	9:00:00 PM	3.428	1.443	118.042
9:15:00 AM	2.33	1.244	59.808	9:15:00 PM	3.444	1.589	124.961
9:30:00 AM	2.452	1.407	69.486	9:30:00 PM	3.709	1.575	146.013
9:45:00 AM	2.441	1.394	70.779	9:45:00 PM	3.859	1.796	161.836
10:00:00 AM	2.505	1.442	75.967	10:00:00 PM	3.553	1.58	138.033
10:15:00 AM	2.597	1.317	73.969	10:15:00 PM	3.681	1.593	146.086
10:30:00 AM	2.6	1.348	70.546	10:30:00 PM	3.682	1.547	141.46
10:45:00 AM	2.67	1.328	74.375	10:45:00 PM	3.638	1.63	134.877
11:00:00 AM	2.635	1.346	77.176	11:00:00 PM	3.424	1.633	135.42
11:15:00 AM	2.753	1.418	86.574	11:15:00 PM	3.177	1.64	117.823
11:30:00 AM	2.693	1.297	76.724	11:30:00 PM	3.062	1.521	107.914
11:45:00 AM	2.432	1.309	66.799	11:45:00 PM	2.906	1.373	88.427
				Inches	Feet/Sec	GPM	
Daily Avg:				2.666	1.353	81.632	
Daily Min:				1.581	0.985	27.686	
Daily Max:				3.859	1.796	161.836	
Peak to Avg:						1.98	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/2/2023, 12:00 a.m. - 12:00 p.m.**

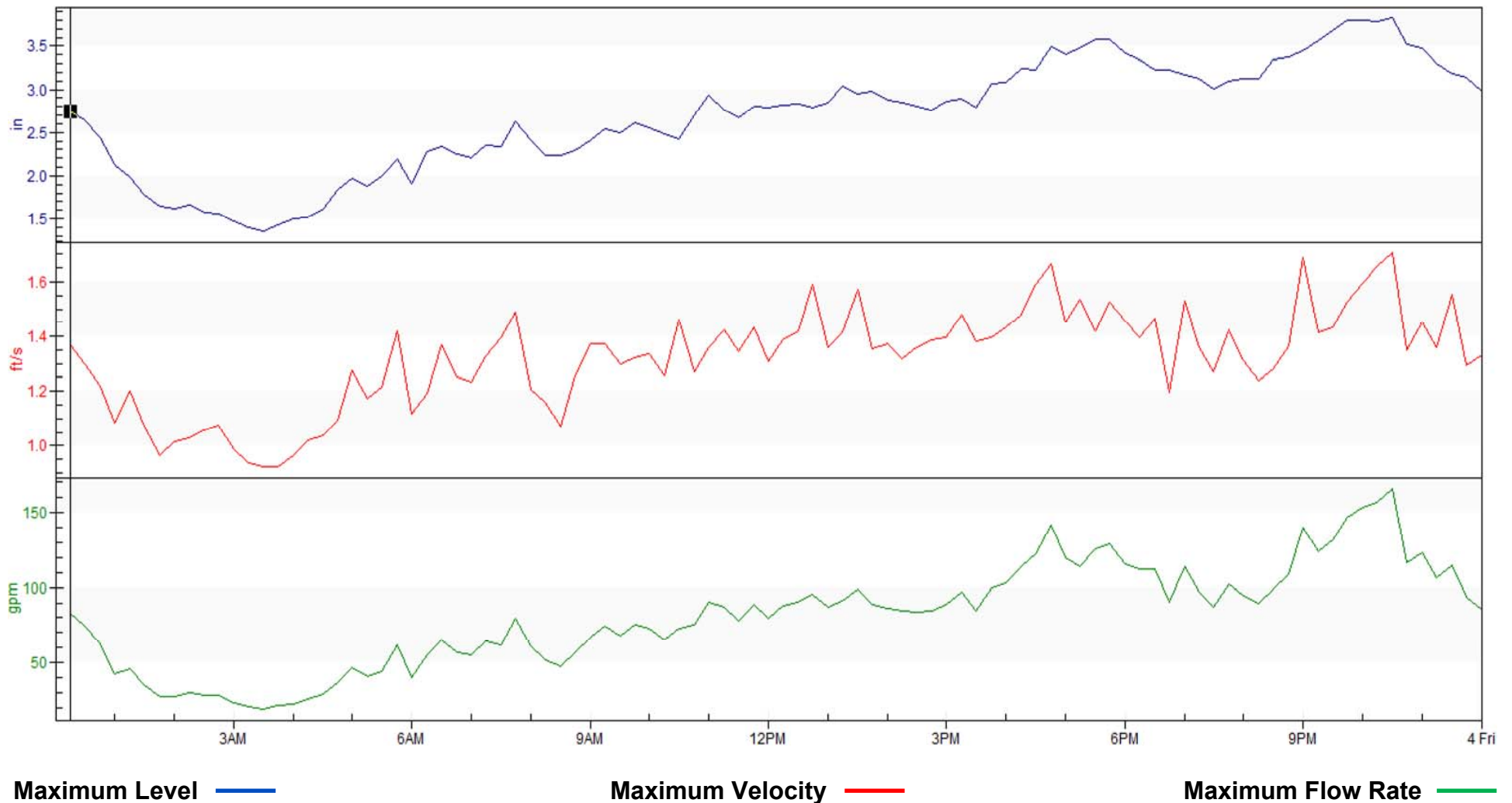
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Wednesday - A.M. 8/2/2023

Wednesday - P.M. 8/2/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	2.715	1.326	78.044	12:00:00 PM	2.631	1.249	71.278
12:15:00 AM	2.649	1.442	80.734	12:15:00 PM	2.806	1.296	81.248
12:30:00 AM	2.704	1.361	80.971	12:30:00 PM	2.839	1.371	82.99
12:45:00 AM	2.628	1.301	74.325	12:45:00 PM	2.63	1.437	79.864
1:00:00 AM	2.244	1.225	55.818	1:00:00 PM	2.761	1.45	88.857
1:15:00 AM	2.094	1.205	49.721	1:15:00 PM	2.829	1.333	82.746
1:30:00 AM	1.917	1.099	39.919	1:30:00 PM	2.618	1.322	72.058
1:45:00 AM	1.787	1.047	34.374	1:45:00 PM	2.579	1.233	67.018
2:00:00 AM	1.66	1.041	30.097	2:00:00 PM	2.539	1.268	68.965
2:15:00 AM	1.651	1.046	30.581	2:15:00 PM	2.816	1.388	87.512
2:30:00 AM	1.583	1.018	27.729	2:30:00 PM	2.676	1.262	73.995
2:45:00 AM	1.576	1.194	31.9	2:45:00 PM	2.612	1.504	85.195
3:00:00 AM	1.656	1.086	30.865	3:00:00 PM	2.668	1.432	76.132
3:15:00 AM	1.54	0.992	24.306	3:15:00 PM	2.759	1.412	83.961
3:30:00 AM	1.588	1.035	28.589	3:30:00 PM	2.845	1.39	85.054
3:45:00 AM	1.684	1.018	30.594	3:45:00 PM	3.497	1.619	122.644
4:00:00 AM	1.804	1.042	34.517	4:00:00 PM	3.474	1.598	135.064
4:15:00 AM	1.926	1.025	36.737	4:15:00 PM	3.522	1.4	114.895
4:30:00 AM	1.763	1.116	35.902	4:30:00 PM	3.448	1.48	123.926
4:45:00 AM	1.919	1.175	41.245	4:45:00 PM	3.193	1.455	107.282
5:00:00 AM	1.839	1.211	41.407	5:00:00 PM	3.197	1.468	103.953
5:15:00 AM	1.982	1.199	45.736	5:15:00 PM	3.274	1.493	111.232
5:30:00 AM	2.039	1.133	45.015	5:30:00 PM	3.248	1.401	106.464
5:45:00 AM	2.172	1.371	59.207	5:45:00 PM	3.177	1.438	105.77
6:00:00 AM	2.166	1.301	56.348	6:00:00 PM	3.199	1.647	120.698
6:15:00 AM	2.059	1.152	44.859	6:15:00 PM	3.179	1.395	104.308
6:30:00 AM	2.239	1.261	56.276	6:30:00 PM	3.362	1.544	124.872
6:45:00 AM	2.188	1.227	53.593	6:45:00 PM	3.382	1.504	118.83
7:00:00 AM	2.397	1.271	63.39	7:00:00 PM	3.287	1.478	111.208
7:15:00 AM	2.335	1.457	69.895	7:15:00 PM	3.146	1.394	101.512
7:30:00 AM	2.339	1.288	61.019	7:30:00 PM	3.281	1.49	114.893
7:45:00 AM	2.369	1.267	62.426	7:45:00 PM	3.183	1.604	120.129
8:00:00 AM	2.418	1.308	66.331	8:00:00 PM	3.27	1.499	114.332
8:15:00 AM	2.409	1.285	62.574	8:15:00 PM	3.273	1.622	124.19
8:30:00 AM	2.377	1.345	66.056	8:30:00 PM	3.186	1.445	101.095
8:45:00 AM	2.313	1.309	62.298	8:45:00 PM	3.511	1.548	128.701
9:00:00 AM	2.382	1.342	64.09	9:00:00 PM	3.374	1.487	119.263
9:15:00 AM	2.51	1.347	68.787	9:15:00 PM	3.455	1.569	131.822
9:30:00 AM	2.423	1.365	67.087	9:30:00 PM	3.661	1.654	146.177
9:45:00 AM	2.265	1.258	56.187	9:45:00 PM	3.803	1.661	158.472
10:00:00 AM	2.315	1.26	60.039	10:00:00 PM	3.726	1.583	144.726
10:15:00 AM	2.289	1.26	58.079	10:15:00 PM	3.878	1.574	155.174
10:30:00 AM	2.391	1.328	64.376	10:30:00 PM	3.775	1.509	136.981
10:45:00 AM	2.4	1.408	66.306	10:45:00 PM	3.572	1.601	140.87
11:00:00 AM	2.698	1.369	81.2	11:00:00 PM	3.379	1.602	130.474
11:15:00 AM	2.569	1.389	76.862	11:15:00 PM	3.232	1.421	106.041
11:30:00 AM	2.581	1.328	73.611	11:30:00 PM	2.918	1.402	91.363
11:45:00 AM	2.564	1.415	78.028	11:45:00 PM	2.89	1.437	93.938
				Inches	Feet/Sec	GPM	
Daily Avg:				2.663	1.350	80.928	
Daily Min:				1.54	0.992	24.306	
Daily Max:				3.878	1.661	158.472	
Peak to Avg:						1.96	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/3/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Thursday - A.M. 8/3/2023

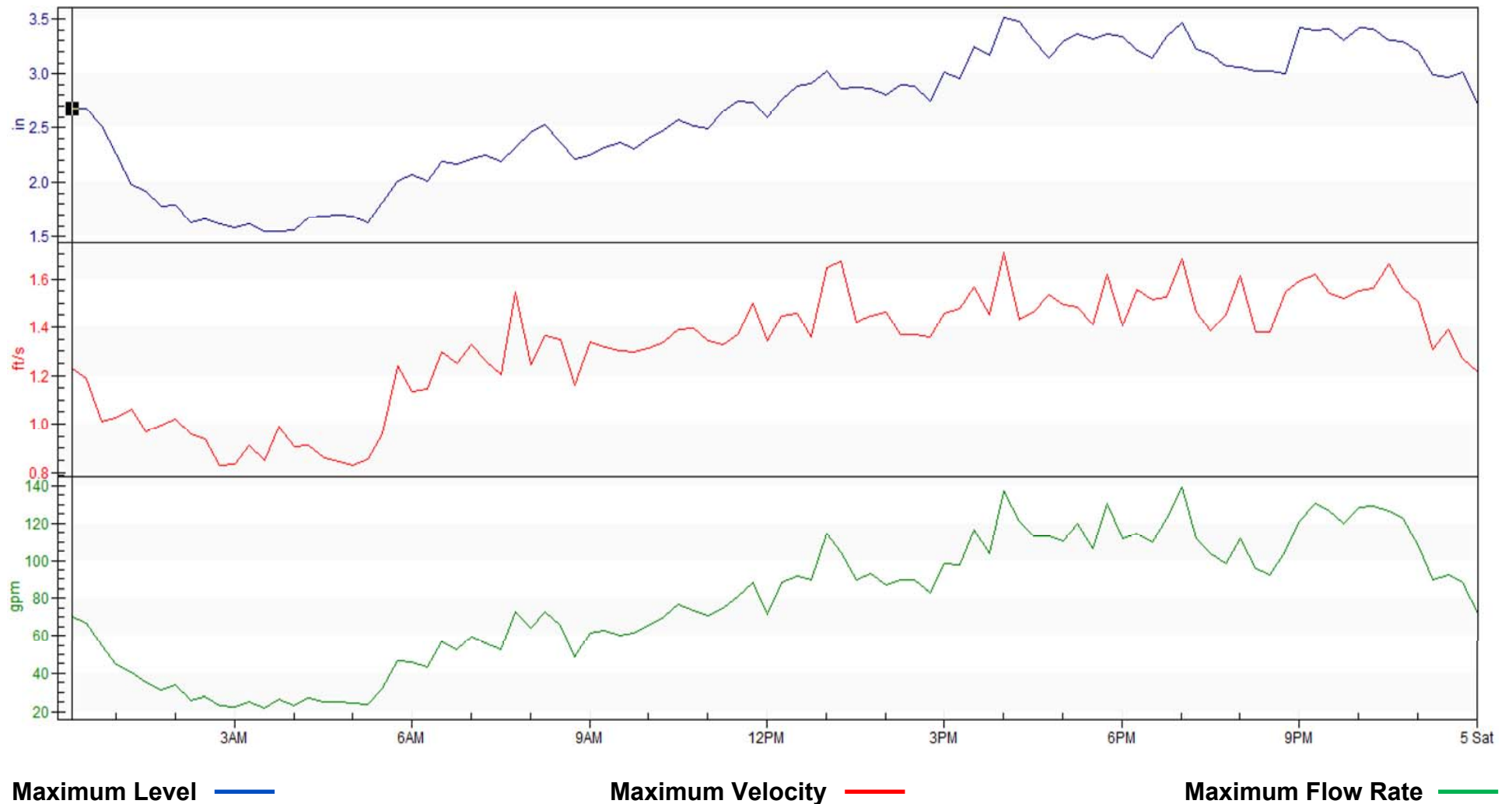
Time	Level	Velocity	Flow
12:00:00 AM	2.992	1.411	90.885
12:15:00 AM	2.745	1.367	83.073
12:30:00 AM	2.636	1.298	74.483
12:45:00 AM	2.437	1.221	62.67
1:00:00 AM	2.13	1.083	42.625
1:15:00 AM	1.985	1.201	45.867
1:30:00 AM	1.784	1.071	35.06
1:45:00 AM	1.654	0.963	27.845
2:00:00 AM	1.613	1.013	27.602
2:15:00 AM	1.66	1.03	30.373
2:30:00 AM	1.574	1.059	28.724
2:45:00 AM	1.556	1.076	28.863
3:00:00 AM	1.468	0.987	23.518
3:15:00 AM	1.4	0.939	21.581
3:30:00 AM	1.355	0.925	19.735
3:45:00 AM	1.431	0.922	21.903
4:00:00 AM	1.498	0.966	22.998
4:15:00 AM	1.511	1.021	26.237
4:30:00 AM	1.623	1.039	29.637
4:45:00 AM	1.841	1.094	37.467
5:00:00 AM	1.965	1.277	46.785
5:15:00 AM	1.886	1.175	41.261
5:30:00 AM	2.007	1.213	44.459
5:45:00 AM	2.187	1.42	62.368
6:00:00 AM	1.916	1.118	40.587
6:15:00 AM	2.28	1.193	55.625
6:30:00 AM	2.337	1.366	65.445
6:45:00 AM	2.244	1.25	56.975
7:00:00 AM	2.211	1.233	55.017
7:15:00 AM	2.355	1.326	64.783
7:30:00 AM	2.329	1.394	61.983
7:45:00 AM	2.627	1.49	79.834
8:00:00 AM	2.41	1.207	60.926
8:15:00 AM	2.229	1.158	51.873
8:30:00 AM	2.234	1.07	47.928
8:45:00 AM	2.292	1.257	56.928
9:00:00 AM	2.407	1.373	66.731
9:15:00 AM	2.534	1.372	74.413
9:30:00 AM	2.497	1.297	67.859
9:45:00 AM	2.619	1.322	75.145
10:00:00 AM	2.549	1.333	72.941
10:15:00 AM	2.476	1.258	65.06
10:30:00 AM	2.42	1.46	73.324
10:45:00 AM	2.709	1.271	75.82
11:00:00 AM	2.932	1.359	90.663
11:15:00 AM	2.757	1.424	87.058
11:30:00 AM	2.676	1.343	78.037
11:45:00 AM	2.809	1.433	88.406

Thursday - P.M. 8/3/2023

Time	Level	Velocity	Flow
12:00:00 PM	2.795	1.307	79.387
12:15:00 PM	2.821	1.388	87.672
12:30:00 PM	2.838	1.418	90.347
12:45:00 PM	2.792	1.59	95.218
1:00:00 PM	2.841	1.36	86.766
1:15:00 PM	3.038	1.413	91.584
1:30:00 PM	2.945	1.573	98.846
1:45:00 PM	2.98	1.354	89.014
2:00:00 PM	2.872	1.374	86.632
2:15:00 PM	2.854	1.315	84.493
2:30:00 PM	2.798	1.358	83.915
2:45:00 PM	2.765	1.387	84.502
3:00:00 PM	2.868	1.397	88.926
3:15:00 PM	2.893	1.481	96.926
3:30:00 PM	2.785	1.38	84.535
3:45:00 PM	3.065	1.398	99.315
4:00:00 PM	3.086	1.435	102.894
4:15:00 PM	3.239	1.481	113.692
4:30:00 PM	3.234	1.593	121.998
4:45:00 PM	3.486	1.665	141.646
5:00:00 PM	3.411	1.452	119.823
5:15:00 PM	3.474	1.535	114.168
5:30:00 PM	3.584	1.417	125.202
5:45:00 PM	3.581	1.524	129.053
6:00:00 PM	3.415	1.454	115.652
6:15:00 PM	3.345	1.395	112.026
6:30:00 PM	3.23	1.467	112.155
6:45:00 PM	3.227	1.194	90.676
7:00:00 PM	3.17	1.532	114.063
7:15:00 PM	3.122	1.361	97.279
7:30:00 PM	3.015	1.271	87.356
7:45:00 PM	3.092	1.426	102.503
8:00:00 PM	3.128	1.314	94.844
8:15:00 PM	3.119	1.236	89.934
8:30:00 PM	3.342	1.28	98.796
8:45:00 PM	3.372	1.365	108.588
9:00:00 PM	3.446	1.688	139.859
9:15:00 PM	3.557	1.415	123.814
9:30:00 PM	3.681	1.431	131.238
9:45:00 PM	3.802	1.527	146.453
10:00:00 PM	3.799	1.595	152.816
10:15:00 PM	3.783	1.657	156.353
10:30:00 PM	3.828	1.707	165.278
10:45:00 PM	3.52	1.351	116.352
11:00:00 PM	3.471	1.451	122.642
11:15:00 PM	3.308	1.359	106.155
11:30:00 PM	3.191	1.552	114.793
11:45:00 PM	3.144	1.292	93.517

	Inches	Feet/Sec	GPM
Daily Avg:	2.683	1.321	80.906
Daily Min:	1.355	0.922	19.735
Daily Max:	3.828	1.707	165.278
Peak to Avg:			2.04

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**
Location: **MH-7084**
Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**
Time Period: **8/4/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Friday - A.M. 8/4/2023

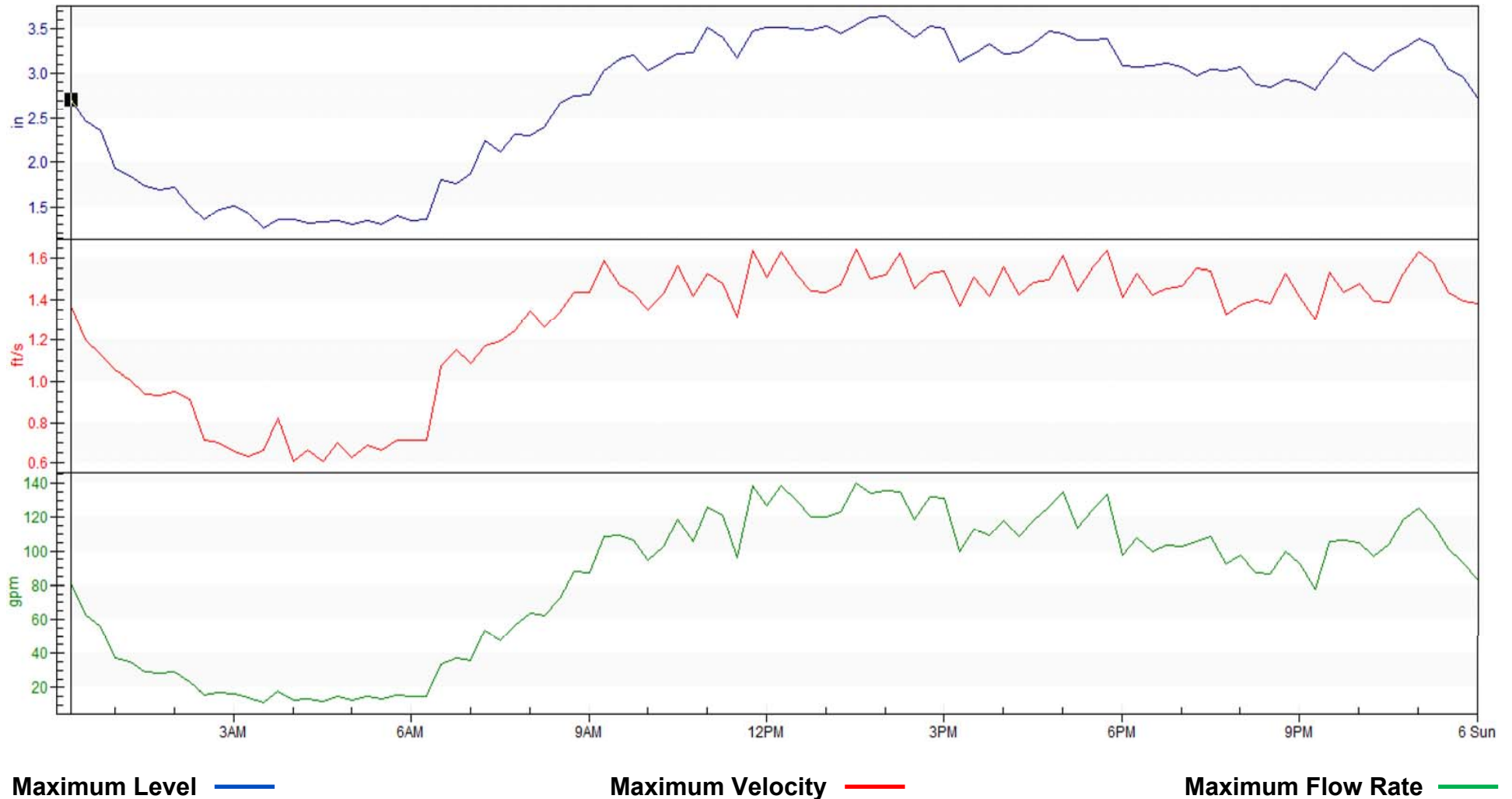
Time	Level	Velocity	Flow
12:00:00 AM	2.986	1.329	85.228
12:15:00 AM	2.675	1.231	70.219
12:30:00 AM	2.678	1.189	66.823
12:45:00 AM	2.518	1.013	54.473
1:00:00 AM	2.264	1.025	44.784
1:15:00 AM	1.981	1.061	40.433
1:30:00 AM	1.917	0.968	35.013
1:45:00 AM	1.783	0.993	31.53
2:00:00 AM	1.798	1.021	33.783
2:15:00 AM	1.625	0.958	25.858
2:30:00 AM	1.669	0.937	27.844
2:45:00 AM	1.616	0.83	23.101
3:00:00 AM	1.581	0.835	22.454
3:15:00 AM	1.618	0.913	25.518
3:30:00 AM	1.549	0.849	21.984
3:45:00 AM	1.549	0.988	26.343
4:00:00 AM	1.555	0.908	23.43
4:15:00 AM	1.68	0.912	27.159
4:30:00 AM	1.687	0.858	24.971
4:45:00 AM	1.699	0.845	25.207
5:00:00 AM	1.691	0.829	24.566
5:15:00 AM	1.635	0.855	23.839
5:30:00 AM	1.814	0.959	31.727
5:45:00 AM	2.011	1.239	46.575
6:00:00 AM	2.072	1.134	46.094
6:15:00 AM	2.019	1.144	43.112
6:30:00 AM	2.187	1.295	56.886
6:45:00 AM	2.165	1.251	52.872
7:00:00 AM	2.216	1.329	59.489
7:15:00 AM	2.244	1.258	56.093
7:30:00 AM	2.189	1.201	52.831
7:45:00 AM	2.315	1.546	72.835
8:00:00 AM	2.454	1.242	63.796
8:15:00 AM	2.522	1.366	73.108
8:30:00 AM	2.364	1.351	65.257
8:45:00 AM	2.213	1.16	48.858
9:00:00 AM	2.249	1.339	61.233
9:15:00 AM	2.317	1.319	62.963
9:30:00 AM	2.359	1.3	60.409
9:45:00 AM	2.304	1.297	61.395
10:00:00 AM	2.4	1.314	65.162
10:15:00 AM	2.479	1.338	70.341
10:30:00 AM	2.574	1.388	76.988
10:45:00 AM	2.508	1.394	73.573
11:00:00 AM	2.491	1.343	70.887
11:15:00 AM	2.654	1.328	74.533
11:30:00 AM	2.745	1.37	81.207
11:45:00 AM	2.73	1.501	88.307

Friday - P.M. 8/4/2023

Time	Level	Velocity	Flow
12:00:00 PM	2.601	1.342	71.211
12:15:00 PM	2.761	1.449	88.03
12:30:00 PM	2.884	1.456	91.677
12:45:00 PM	2.906	1.357	89.414
1:00:00 PM	3.024	1.642	114.442
1:15:00 PM	2.865	1.67	104.288
1:30:00 PM	2.875	1.421	89.744
1:45:00 PM	2.86	1.447	93.214
2:00:00 PM	2.808	1.465	87.216
2:15:00 PM	2.902	1.367	89.496
2:30:00 PM	2.889	1.367	89.308
2:45:00 PM	2.748	1.358	82.676
3:00:00 PM	3.014	1.458	98.204
3:15:00 PM	2.961	1.477	97.675
3:30:00 PM	3.25	1.568	116.325
3:45:00 PM	3.167	1.451	103.773
4:00:00 PM	3.514	1.707	137.389
4:15:00 PM	3.478	1.433	121.47
4:30:00 PM	3.308	1.463	113.194
4:45:00 PM	3.146	1.535	113.099
5:00:00 PM	3.287	1.493	110.493
5:15:00 PM	3.357	1.481	119.521
5:30:00 PM	3.31	1.411	106.503
5:45:00 PM	3.356	1.618	130.564
6:00:00 PM	3.338	1.405	111.728
6:15:00 PM	3.217	1.555	114.092
6:30:00 PM	3.138	1.515	109.593
6:45:00 PM	3.342	1.524	122.171
7:00:00 PM	3.467	1.681	139.101
7:15:00 PM	3.222	1.462	111.429
7:30:00 PM	3.177	1.387	103.595
7:45:00 PM	3.072	1.453	98.562
8:00:00 PM	3.059	1.614	111.44
8:15:00 PM	3.026	1.381	95.659
8:30:00 PM	3.021	1.382	92.169
8:45:00 PM	3.004	1.544	105.223
9:00:00 PM	3.424	1.595	121.346
9:15:00 PM	3.4	1.62	130.244
9:30:00 PM	3.403	1.54	126.609
9:45:00 PM	3.306	1.518	119.617
10:00:00 PM	3.425	1.551	128.698
10:15:00 PM	3.409	1.563	128.888
10:30:00 PM	3.302	1.662	126.236
10:45:00 PM	3.292	1.56	122.454
11:00:00 PM	3.204	1.506	107.512
11:15:00 PM	2.986	1.31	89.562
11:30:00 PM	2.967	1.39	92.617
11:45:00 PM	3.016	1.268	88.073

	Inches	Feet/Sec	GPM
Daily Avg:	2.630	1.317	78.646
Daily Min:	1.549	0.829	21.984
Daily Max:	3.514	1.707	139.101
Peak to Avg:			1.77

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/5/2023, 12:00 a.m. - 12:00 p.m.**

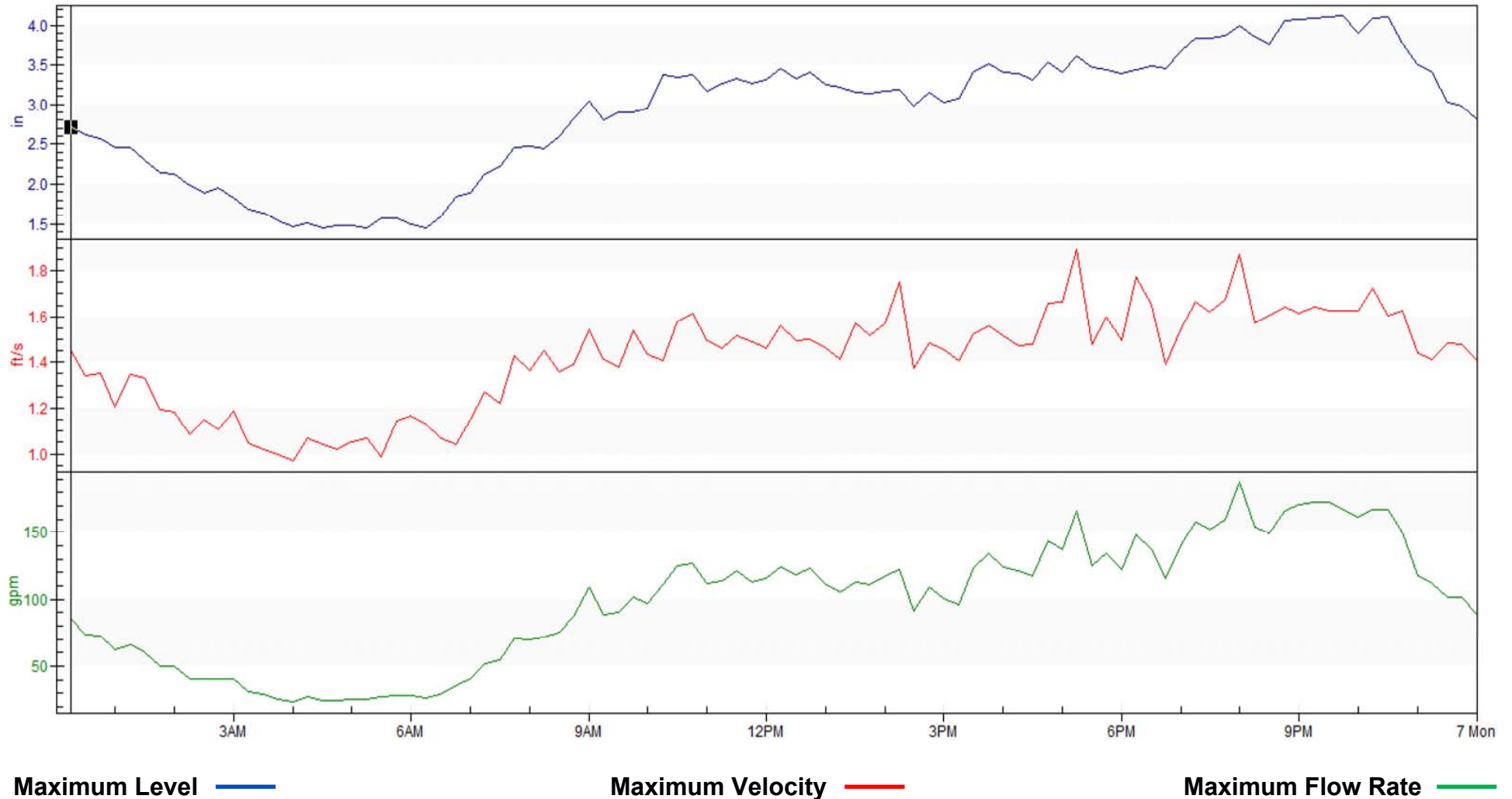
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Saturday - A.M. 8/5/2023

Saturday - P.M. 8/5/2023

Time	Level	Velocity	Flow		Time	Level	Velocity	Flow																				
12:00:00 AM	2.727	1.215	72.453		12:00:00 PM	3.509	1.508	127.223																				
12:15:00 AM	2.714	1.364	81.59		12:15:00 PM	3.515	1.629	138.634																				
12:30:00 AM	2.475	1.204	63.179		12:30:00 PM	3.49	1.523	129.808																				
12:45:00 AM	2.357	1.131	55.294		12:45:00 PM	3.477	1.438	120.63																				
1:00:00 AM	1.933	1.052	37.179		1:00:00 PM	3.53	1.434	120.341																				
1:15:00 AM	1.851	1.007	34.788		1:15:00 PM	3.444	1.47	122.933																				
1:30:00 AM	1.74	0.939	29.137		1:30:00 PM	3.537	1.643	139.98																				
1:45:00 AM	1.695	0.93	28.254		1:45:00 PM	3.625	1.5	134.394																				
2:00:00 AM	1.716	0.951	29.421		2:00:00 PM	3.638	1.522	135.997																				
2:15:00 AM	1.506	0.912	23.317		2:15:00 PM	3.516	1.625	135.276																				
2:30:00 AM	1.355	0.711	15.583		2:30:00 PM	3.399	1.455	118.642																				
2:45:00 AM	1.475	0.698	17.285		2:45:00 PM	3.532	1.529	132.399																				
3:00:00 AM	1.506	0.658	16.831		3:00:00 PM	3.493	1.542	131.506																				
3:15:00 AM	1.422	0.632	14.544		3:15:00 PM	3.13	1.366	99.941																				
3:30:00 AM	1.257	0.661	11.655		3:30:00 PM	3.214	1.511	112.961																				
3:45:00 AM	1.359	0.824	18.146		3:45:00 PM	3.33	1.414	109.227																				
4:00:00 AM	1.354	0.608	13.32		4:00:00 PM	3.215	1.556	118.169																				
4:15:00 AM	1.314	0.662	13.88		4:15:00 PM	3.228	1.42	108.518																				
4:30:00 AM	1.321	0.607	12.238		4:30:00 PM	3.326	1.484	118.253																				
4:45:00 AM	1.335	0.701	15.031		4:45:00 PM	3.473	1.497	125.88																				
5:00:00 AM	1.294	0.627	12.596		5:00:00 PM	3.447	1.61	134.787																				
5:15:00 AM	1.343	0.686	14.836		5:15:00 PM	3.37	1.44	113.633																				
5:30:00 AM	1.299	0.665	13.698		5:30:00 PM	3.367	1.557	124.494																				
5:45:00 AM	1.391	0.713	15.719		5:45:00 PM	3.386	1.634	133.512																				
6:00:00 AM	1.341	0.713	15.388		6:00:00 PM	3.089	1.41	97.649																				
6:15:00 AM	1.359	0.71	15.275		6:15:00 PM	3.077	1.529	108.02																				
6:30:00 AM	1.813	1.07	33.881		6:30:00 PM	3.09	1.425	99.869																				
6:45:00 AM	1.758	1.155	36.995		6:45:00 PM	3.116	1.453	103.607																				
7:00:00 AM	1.872	1.084	35.537		7:00:00 PM	3.075	1.467	102.944																				
7:15:00 AM	2.238	1.173	53.229		7:15:00 PM	2.979	1.554	105.41																				
7:30:00 AM	2.123	1.195	47.688		7:30:00 PM	3.051	1.537	108.455																				
7:45:00 AM	2.31	1.245	56.7		7:45:00 PM	3.029	1.324	92.496																				
8:00:00 AM	2.303	1.344	63.572		8:00:00 PM	3.076	1.373	97.642																				
8:15:00 AM	2.398	1.261	62.58		8:15:00 PM	2.876	1.398	87.531																				
8:30:00 AM	2.663	1.338	72.544		8:30:00 PM	2.85	1.379	86.705																				
8:45:00 AM	2.756	1.436	87.754		8:45:00 PM	2.939	1.525	99.519																				
9:00:00 AM	2.764	1.437	87.256		9:00:00 PM	2.902	1.413	92.445																				
9:15:00 AM	3.033	1.588	108.609		9:15:00 PM	2.816	1.298	77.417																				
9:30:00 AM	3.165	1.471	109.31		9:30:00 PM	3.047	1.53	105.293																				
9:45:00 AM	3.195	1.431	106.045		9:45:00 PM	3.233	1.437	106.654																				
10:00:00 AM	3.038	1.349	94.625		10:00:00 PM	3.105	1.478	104.809																				
10:15:00 AM	3.128	1.427	102.776		10:15:00 PM	3.029	1.392	97.059																				
10:30:00 AM	3.218	1.565	119.036		10:30:00 PM	3.187	1.384	103.867																				
10:45:00 AM	3.231	1.416	105.721		10:45:00 PM	3.277	1.524	118.915																				
11:00:00 AM	3.509	1.528	126.338		11:00:00 PM	3.377	1.63	125.144																				
11:15:00 AM	3.396	1.478	121.209		11:15:00 PM	3.311	1.579	115.712																				
11:30:00 AM	3.177	1.314	96.268		11:30:00 PM	3.052	1.437	101.224																				
11:45:00 AM	3.472	1.636	138.366		11:45:00 PM	2.958	1.394	92.967																				
					<table><tr><th></th><th>Inches</th><th>Feet/Sec</th><th>GPM</th></tr><tr><td>Daily Avg:</td><td>2.695</td><td>1.279</td><td>83.186</td></tr><tr><td>Daily Min:</td><td>1.257</td><td>0.607</td><td>11.655</td></tr><tr><td>Daily Max:</td><td>3.638</td><td>1.643</td><td>139.98</td></tr><tr><td>Peak to Avg:</td><td></td><td></td><td>1.68</td></tr></table>					Inches	Feet/Sec	GPM	Daily Avg:	2.695	1.279	83.186	Daily Min:	1.257	0.607	11.655	Daily Max:	3.638	1.643	139.98	Peak to Avg:			1.68
	Inches	Feet/Sec	GPM																									
Daily Avg:	2.695	1.279	83.186																									
Daily Min:	1.257	0.607	11.655																									
Daily Max:	3.638	1.643	139.98																									
Peak to Avg:			1.68																									

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/6/2023, 12:00 a.m. - 12:00 p.m.**

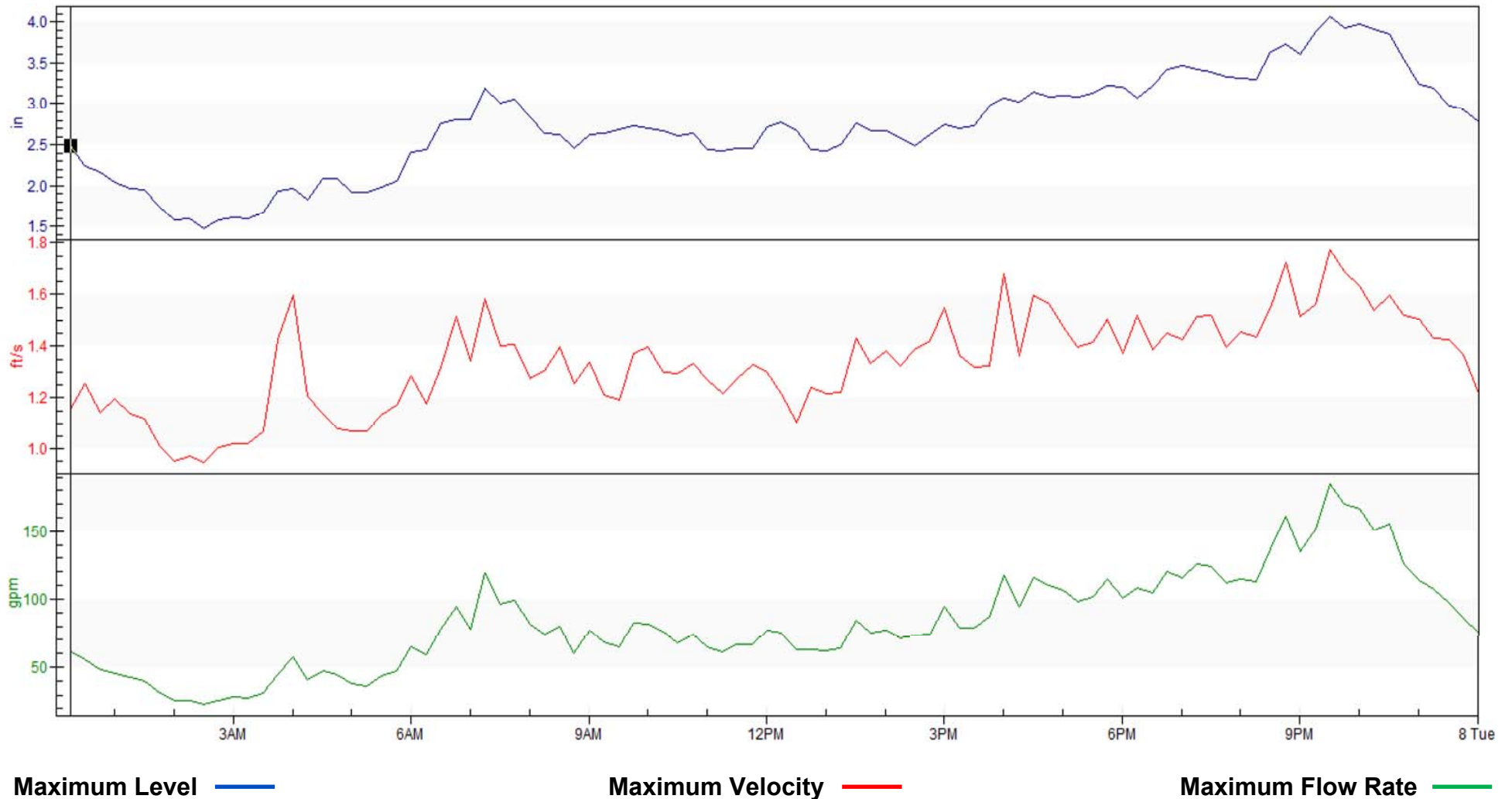
Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Sunday - A.M. 8/6/2023

Sunday - P.M. 8/6/2023

Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	2.72	1.38	82.825	12:00:00 PM	3.317	1.461	115.91
12:15:00 AM	2.706	1.45	85.833	12:15:00 PM	3.448	1.558	124.369
12:30:00 AM	2.621	1.34	73.341	12:30:00 PM	3.329	1.495	117.916
12:45:00 AM	2.566	1.354	72.147	12:45:00 PM	3.4	1.499	123.174
1:00:00 AM	2.455	1.206	62.382	1:00:00 PM	3.256	1.462	110.454
1:15:00 AM	2.457	1.349	65.669	1:15:00 PM	3.224	1.411	105.359
1:30:00 AM	2.306	1.328	59.946	1:30:00 PM	3.154	1.573	112.906
1:45:00 AM	2.147	1.192	49.955	1:45:00 PM	3.133	1.515	110.991
2:00:00 AM	2.126	1.181	49.815	2:00:00 PM	3.17	1.57	116.966
2:15:00 AM	1.978	1.083	40.959	2:15:00 PM	3.19	1.751	121.839
2:30:00 AM	1.888	1.151	40.901	2:30:00 PM	2.982	1.377	91.397
2:45:00 AM	1.954	1.108	40.279	2:45:00 PM	3.155	1.484	108.534
3:00:00 AM	1.821	1.19	40.129	3:00:00 PM	3.026	1.458	100.479
3:15:00 AM	1.681	1.047	30.745	3:15:00 PM	3.073	1.406	96.089
3:30:00 AM	1.636	1.018	29.37	3:30:00 PM	3.412	1.522	123.152
3:45:00 AM	1.535	0.996	25.88	3:45:00 PM	3.52	1.558	134.289
4:00:00 AM	1.466	0.97	23.861	4:00:00 PM	3.415	1.514	124.359
4:15:00 AM	1.507	1.07	27.393	4:15:00 PM	3.396	1.472	120.659
4:30:00 AM	1.452	1.039	24.794	4:30:00 PM	3.319	1.48	117.532
4:45:00 AM	1.473	1.02	24.535	4:45:00 PM	3.533	1.656	143.497
5:00:00 AM	1.471	1.055	25.471	5:00:00 PM	3.407	1.666	137.3
5:15:00 AM	1.445	1.067	25.087	5:15:00 PM	3.613	1.894	165.843
5:30:00 AM	1.577	0.989	27.06	5:30:00 PM	3.466	1.481	124.519
5:45:00 AM	1.569	1.145	28.505	5:45:00 PM	3.445	1.6	133.897
6:00:00 AM	1.497	1.165	28.476	6:00:00 PM	3.387	1.493	121.952
6:15:00 AM	1.447	1.128	26.912	6:15:00 PM	3.437	1.775	147.971
6:30:00 AM	1.582	1.07	29.344	6:30:00 PM	3.493	1.654	137.057
6:45:00 AM	1.836	1.041	35.404	6:45:00 PM	3.452	1.391	115.772
7:00:00 AM	1.887	1.149	40.793	7:00:00 PM	3.67	1.551	141.234
7:15:00 AM	2.124	1.271	52.025	7:15:00 PM	3.841	1.665	158.04
7:30:00 AM	2.217	1.224	54.839	7:30:00 PM	3.843	1.619	152.253
7:45:00 AM	2.455	1.432	70.232	7:45:00 PM	3.859	1.674	159.679
8:00:00 AM	2.472	1.363	70.001	8:00:00 PM	3.986	1.871	187.455
8:15:00 AM	2.437	1.452	71.554	8:15:00 PM	3.854	1.571	153.565
8:30:00 AM	2.601	1.357	74.763	8:30:00 PM	3.755	1.602	149.126
8:45:00 AM	2.816	1.393	87.393	8:45:00 PM	4.063	1.642	166.513
9:00:00 AM	3.047	1.543	108.673	9:00:00 PM	4.079	1.617	170.867
9:15:00 AM	2.808	1.414	88.763	9:15:00 PM	4.087	1.64	172.335
9:30:00 AM	2.897	1.382	90.346	9:30:00 PM	4.105	1.624	173.119
9:45:00 AM	2.899	1.538	100.974	9:45:00 PM	4.121	1.623	166.962
10:00:00 AM	2.955	1.434	96.774	10:00:00 PM	3.895	1.627	161.388
10:15:00 AM	3.372	1.406	110.621	10:15:00 PM	4.086	1.726	167.159
10:30:00 AM	3.342	1.579	125.028	10:30:00 PM	4.11	1.604	167.159
10:45:00 AM	3.376	1.615	127.061	10:45:00 PM	3.768	1.625	150.117
11:00:00 AM	3.17	1.496	111.418	11:00:00 PM	3.51	1.441	117.807
11:15:00 AM	3.26	1.462	113.194	11:15:00 PM	3.402	1.412	111.578
11:30:00 AM	3.327	1.517	120.889	11:30:00 PM	3.031	1.483	101.762
11:45:00 AM	3.26	1.489	113.06	11:45:00 PM	2.988	1.476	101.116
				Inches	Feet/Sec	GPM	
Daily Avg:				2.907	1.416	98.484	
Daily Min:				1.445	0.97	23.861	
Daily Max:				4.121	1.894	187.455	
Peak to Avg:						1.90	

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/7/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Monday - A.M. 8/7/2023

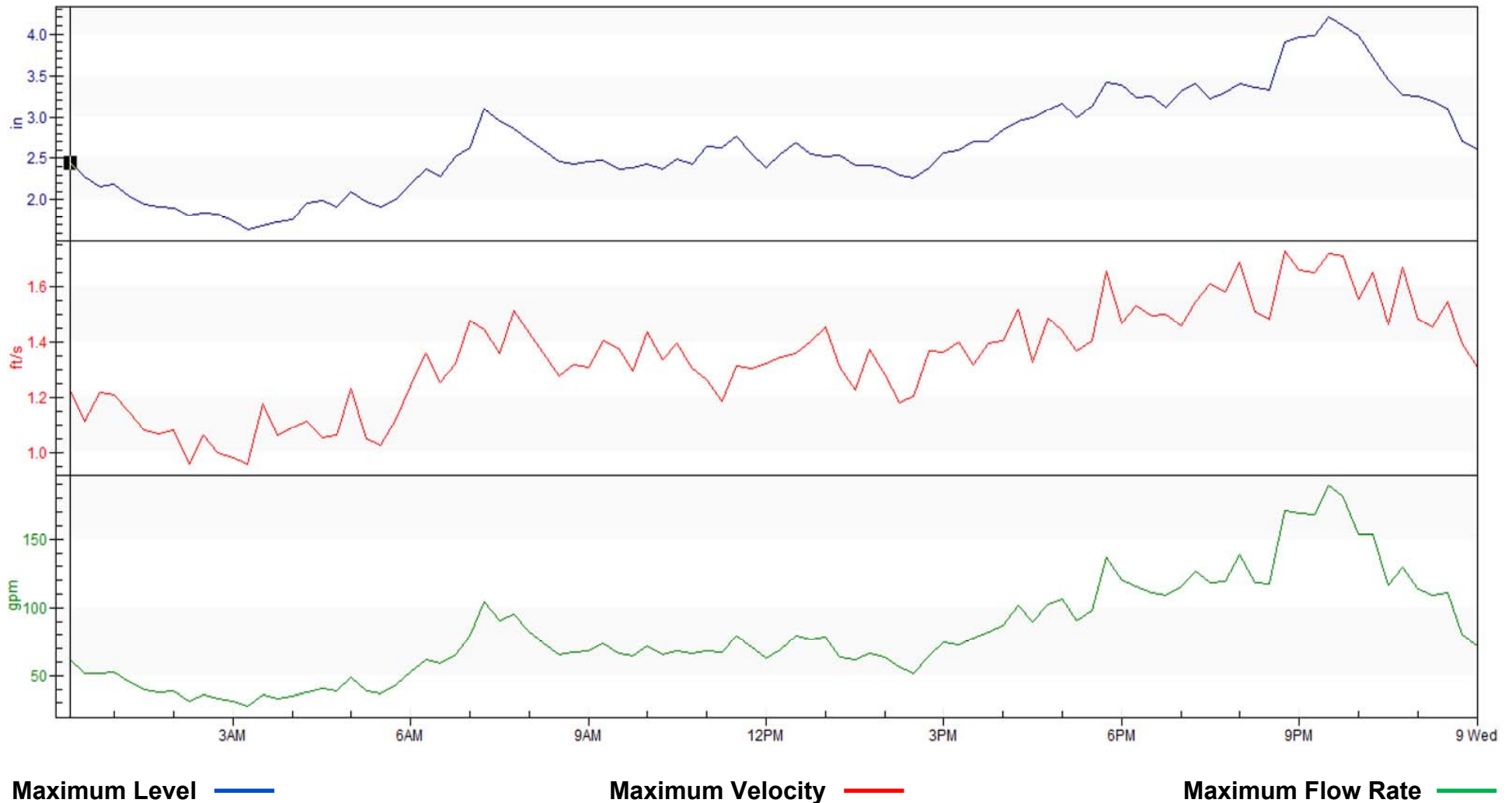
Time	Level	Velocity	Velocity
12:10:00 AM	2.799	1.408	87.952
12:15:00 AM	2.49	1.158	61.277
12:30:00 AM	2.24	1.256	55.162
12:45:00 AM	2.16	1.142	47.954
1:00:00 AM	2.035	1.195	44.951
1:15:00 AM	1.957	1.139	42.599
1:30:00 AM	1.953	1.12	40.02
1:45:00 AM	1.724	1.009	31.435
2:00:00 AM	1.571	0.952	25.886
2:15:00 AM	1.596	0.97	25.98
2:30:00 AM	1.47	0.947	23.377
2:45:00 AM	1.571	1.005	26.136
3:00:00 AM	1.614	1.02	28.621
3:15:00 AM	1.589	1.019	27.83
3:30:00 AM	1.678	1.07	31.06
3:45:00 AM	1.938	1.427	44.291
4:00:00 AM	1.955	1.597	57.175
4:15:00 AM	1.828	1.207	40.823
4:30:00 AM	2.087	1.14	46.816
4:45:00 AM	2.083	1.079	44.19
5:00:00 AM	1.911	1.071	38.275
5:15:00 AM	1.922	1.071	36.323
5:30:00 AM	1.985	1.135	43.336
5:45:00 AM	2.054	1.173	46.813
6:00:00 AM	2.403	1.284	64.555
6:15:00 AM	2.444	1.178	59.282
6:30:00 AM	2.759	1.318	77.684
6:45:00 AM	2.804	1.513	94.734
7:00:00 AM	2.808	1.343	78.002
7:15:00 AM	3.195	1.581	118.992
7:30:00 AM	3.009	1.401	96.597
7:45:00 AM	3.057	1.405	98.979
8:00:00 AM	2.841	1.277	81.489
8:15:00 AM	2.644	1.306	74.181
8:30:00 AM	2.626	1.396	79.672
8:45:00 AM	2.456	1.255	59.899
9:00:00 AM	2.629	1.339	76.537
9:15:00 AM	2.633	1.211	68.171
9:30:00 AM	2.683	1.192	64.427
9:45:00 AM	2.729	1.371	82.631
10:00:00 AM	2.707	1.396	81.074
10:15:00 AM	2.676	1.298	76.12
10:30:00 AM	2.612	1.295	67.475
10:45:00 AM	2.643	1.334	74.314
11:00:00 AM	2.444	1.271	65.146
11:15:00 AM	2.418	1.216	61.212
11:30:00 AM	2.456	1.276	66.182
11:45:00 AM	2.449	1.33	66.183

Monday - P.M. 8/7/2023

Time	Level	Velocity	Flow
12:00:00 PM	2.708	1.301	76.708
12:15:00 PM	2.775	1.215	74.978
12:30:00 PM	2.671	1.102	62.543
12:45:00 PM	2.436	1.239	63.08
1:00:00 PM	2.425	1.217	62.008
1:15:00 PM	2.505	1.22	64.257
1:30:00 PM	2.759	1.431	84.265
1:45:00 PM	2.664	1.333	74.952
2:00:00 PM	2.672	1.381	77.249
2:15:00 PM	2.571	1.324	71.454
2:30:00 PM	2.49	1.389	73.388
2:45:00 PM	2.623	1.422	73.663
3:00:00 PM	2.748	1.549	94.308
3:15:00 PM	2.707	1.361	78.707
3:30:00 PM	2.727	1.318	78.882
3:45:00 PM	2.971	1.321	86.838
4:00:00 PM	3.076	1.681	117.807
4:15:00 PM	3.03	1.364	94.182
4:30:00 PM	3.142	1.597	115.501
4:45:00 PM	3.085	1.563	109.738
5:00:00 PM	3.097	1.475	106.352
5:15:00 PM	3.08	1.396	97.693
5:30:00 PM	3.137	1.418	101.565
5:45:00 PM	3.225	1.505	114.858
6:00:00 PM	3.213	1.371	100.586
6:15:00 PM	3.069	1.519	108.088
6:30:00 PM	3.222	1.388	104.355
6:45:00 PM	3.422	1.453	120.374
7:00:00 PM	3.467	1.425	115.808
7:15:00 PM	3.425	1.513	125.55
7:30:00 PM	3.398	1.517	124.199
7:45:00 PM	3.332	1.396	111.496
8:00:00 PM	3.318	1.457	114.788
8:15:00 PM	3.301	1.435	112.77
8:30:00 PM	3.631	1.549	137.274
8:45:00 PM	3.723	1.724	160.676
9:00:00 PM	3.603	1.512	134.63
9:15:00 PM	3.88	1.563	151.645
9:30:00 PM	4.069	1.773	184.814
9:45:00 PM	3.937	1.688	169.936
10:00:00 PM	3.976	1.633	166.624
10:15:00 PM	3.908	1.536	150.92
10:30:00 PM	3.849	1.595	155.588
10:45:00 PM	3.547	1.518	126.121
11:00:00 PM	3.237	1.502	114.015
11:15:00 PM	3.185	1.433	107.423
11:30:00 PM	2.972	1.428	96.91
11:45:00 PM	2.93	1.366	85.876

	Inches	Feet/Sec	GPM
Daily Avg:	2.721	1.338	82.940
Daily Min:	1.47	0.947	23.377
Daily Max:	4.069	1.773	184.814
Peak to Avg:			2.23

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/8/2023, 12:00 a.m. - 12:00 p.m.**

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

Tuesday - A.M. 8/8/2023

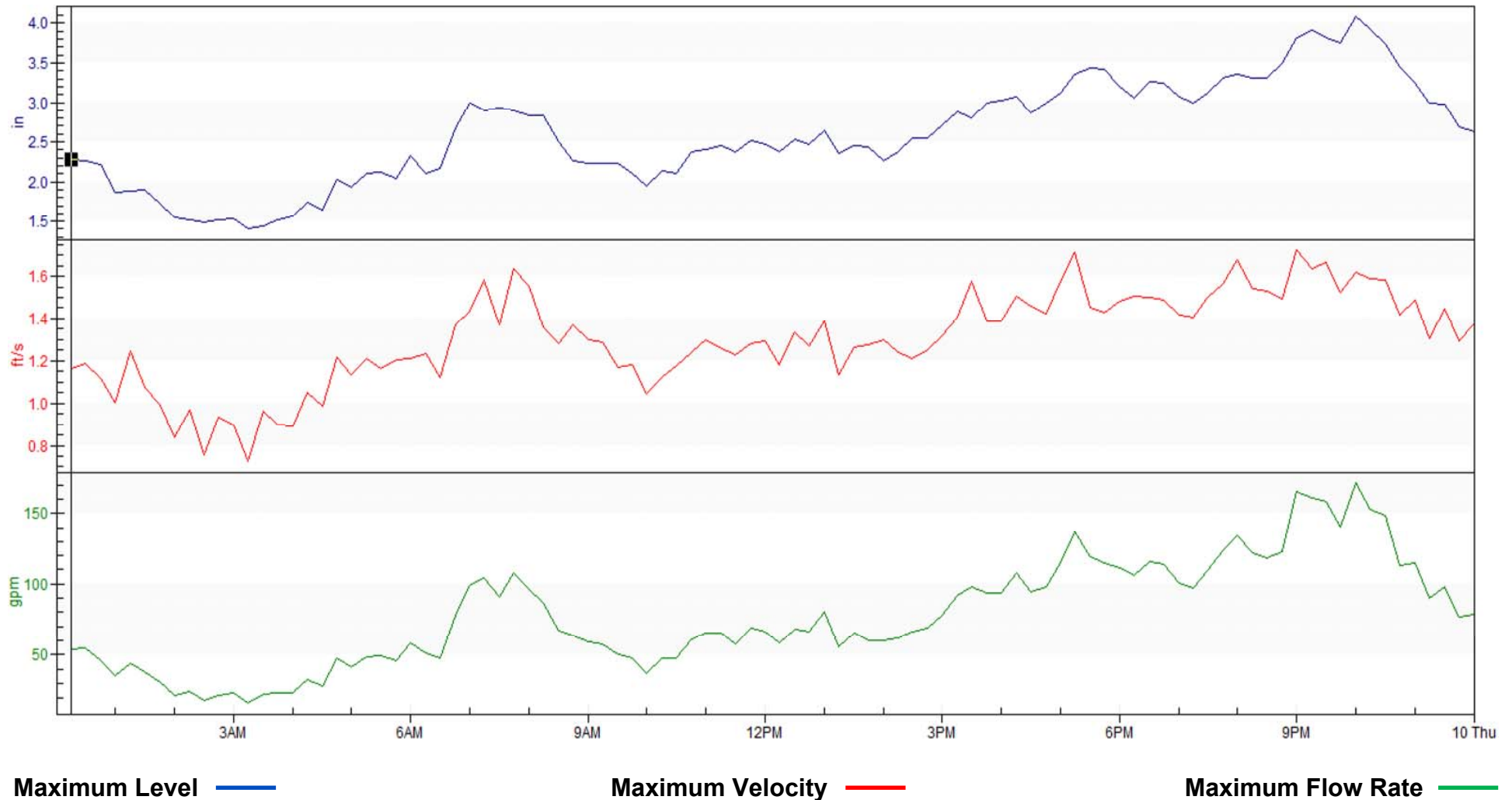
Time	Level	Velocity	Flow
12:00:00 AM	2.781	1.217	75.363
12:15:00 AM	2.449	1.226	62.008
12:30:00 AM	2.284	1.113	52.003
12:45:00 AM	2.151	1.216	52.093
1:00:00 AM	2.181	1.207	52.801
1:15:00 AM	2.038	1.144	45.391
1:30:00 AM	1.941	1.082	40.009
1:45:00 AM	1.909	1.068	38.029
2:00:00 AM	1.902	1.081	38.828
2:15:00 AM	1.813	0.961	31.6
2:30:00 AM	1.838	1.063	36.326
2:45:00 AM	1.828	1.001	33.515
3:00:00 AM	1.743	0.981	31.064
3:15:00 AM	1.641	0.959	27.794
3:30:00 AM	1.692	1.177	35.683
3:45:00 AM	1.74	1.062	33.375
4:00:00 AM	1.758	1.089	34.806
4:15:00 AM	1.967	1.111	37.337
4:30:00 AM	1.984	1.053	40.138
4:45:00 AM	1.922	1.066	38.52
5:00:00 AM	2.102	1.232	48.804
5:15:00 AM	1.975	1.049	38.625
5:30:00 AM	1.917	1.027	36.667
5:45:00 AM	1.999	1.121	43.254
6:00:00 AM	2.193	1.239	52.812
6:15:00 AM	2.371	1.357	62.247
6:30:00 AM	2.284	1.256	58.685
6:45:00 AM	2.525	1.321	65.706
7:00:00 AM	2.631	1.474	78.982
7:15:00 AM	3.094	1.444	103.95
7:30:00 AM	2.953	1.359	90.407
7:45:00 AM	2.86	1.514	94.8
8:00:00 AM	2.727	1.433	82.524
8:15:00 AM	2.59	1.36	74.101
8:30:00 AM	2.462	1.279	65.891
8:45:00 AM	2.436	1.318	67.567
9:00:00 AM	2.463	1.31	68.212
9:15:00 AM	2.473	1.405	73.633
9:30:00 AM	2.363	1.375	66.491
9:45:00 AM	2.383	1.296	64.381
10:00:00 AM	2.433	1.437	71.832
10:15:00 AM	2.37	1.336	65.883
10:30:00 AM	2.494	1.394	68.273
10:45:00 AM	2.434	1.303	66.748
11:00:00 AM	2.65	1.262	68.043
11:15:00 AM	2.632	1.184	67.794
11:30:00 AM	2.772	1.311	78.947
11:45:00 AM	2.547	1.303	71.215

Tuesday - P.M. 8/8/2023

Time	Level	Velocity	Flow
12:00:00 PM	2.391	1.324	62.61
12:15:00 PM	2.553	1.345	69.673
12:30:00 PM	2.684	1.357	79.855
12:45:00 PM	2.555	1.398	76.695
1:00:00 PM	2.525	1.454	78.482
1:15:00 PM	2.535	1.306	64.087
1:30:00 PM	2.423	1.225	62.252
1:45:00 PM	2.421	1.373	65.989
2:00:00 PM	2.387	1.281	63.649
2:15:00 PM	2.301	1.182	55.886
2:30:00 PM	2.264	1.202	51.534
2:45:00 PM	2.393	1.368	64.905
3:00:00 PM	2.565	1.363	75.206
3:15:00 PM	2.597	1.397	73.061
3:30:00 PM	2.704	1.318	77.803
3:45:00 PM	2.709	1.394	81.864
4:00:00 PM	2.847	1.402	86.772
4:15:00 PM	2.946	1.519	101.151
4:30:00 PM	2.995	1.326	89.754
4:45:00 PM	3.091	1.485	102.426
5:00:00 PM	3.154	1.441	106.572
5:15:00 PM	2.998	1.366	90.883
5:30:00 PM	3.126	1.404	97.655
5:45:00 PM	3.424	1.653	137.078
6:00:00 PM	3.389	1.467	119.919
6:15:00 PM	3.241	1.532	115.338
6:30:00 PM	3.256	1.493	110.515
6:45:00 PM	3.121	1.499	109.216
7:00:00 PM	3.31	1.459	115.443
7:15:00 PM	3.399	1.545	126.889
7:30:00 PM	3.228	1.607	118.143
7:45:00 PM	3.302	1.579	119.502
8:00:00 PM	3.402	1.685	138.509
8:15:00 PM	3.359	1.509	118.458
8:30:00 PM	3.321	1.482	117.493
8:45:00 PM	3.91	1.726	170.549
9:00:00 PM	3.968	1.658	168.692
9:15:00 PM	3.983	1.649	168.634
9:30:00 PM	4.207	1.717	189.301
9:45:00 PM	4.099	1.707	181.629
10:00:00 PM	3.984	1.552	153.851
10:15:00 PM	3.726	1.649	153.793
10:30:00 PM	3.448	1.461	116.194
10:45:00 PM	3.261	1.666	129.056
11:00:00 PM	3.243	1.481	113.179
11:15:00 PM	3.196	1.453	109.072
11:30:00 PM	3.093	1.543	110.995
11:45:00 PM	2.709	1.395	80.552

	Inches	Feet/Sec	GPM
Daily Avg:	2.670	1.345	81.353
Daily Min:	1.641	0.959	27.794
Daily Max:	4.207	1.726	189.301
Peak to Avg:			2.33

MAXIMUM DAILY FLOW DATA



Project: **City of McFarland - Sewer Flow Study**

Location: **MH-7084**

Flow Meter: **Teledyne Isco 2150 Area Velocity w/ Pressure Transducer**

Time Period: **8/9/2023, 12:00 a.m. - 12:00 p.m.**

Sewer Line Flow Study Summary

Project: City of McFarland, Sewer Flow Study

Location: MH-7084

Pipe Size: 12" VCP

Time Period: 7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.

Level - Inches

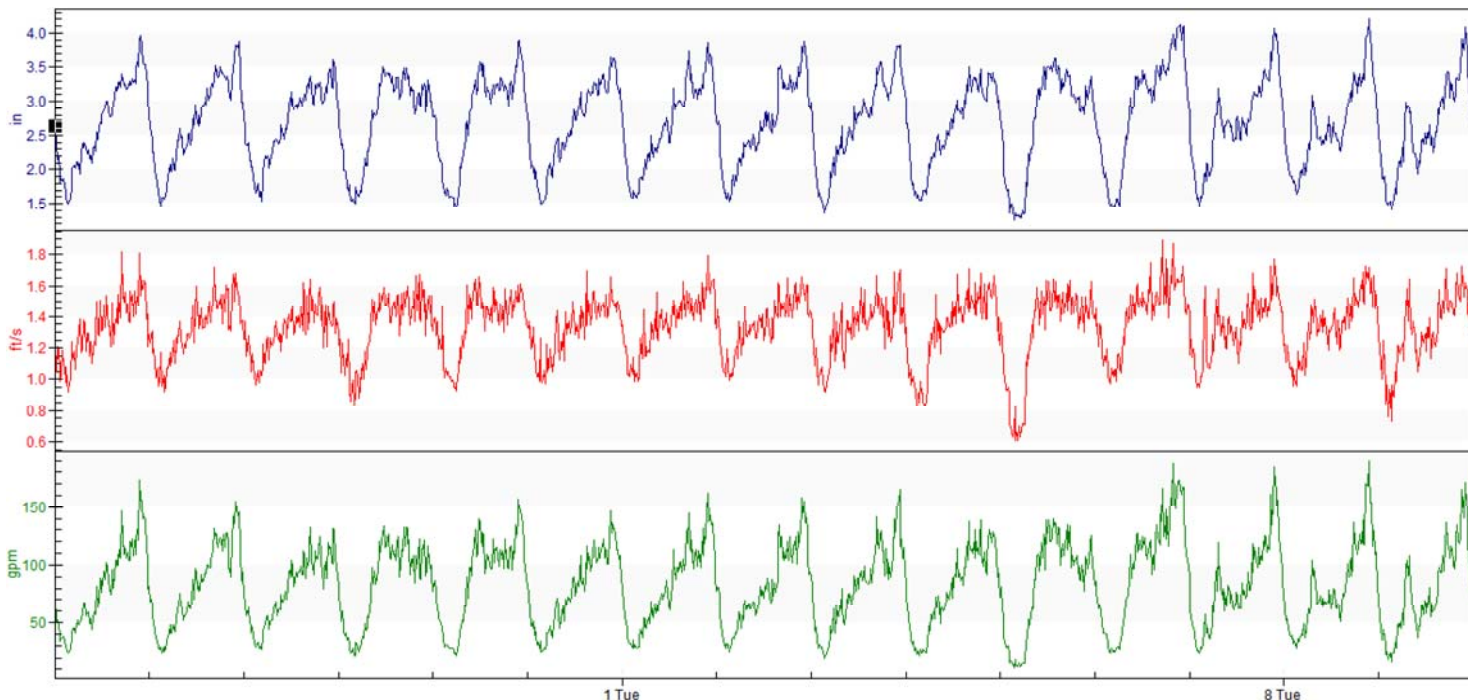
Average:	.....	2.646
Maximum:	.....	4.207
Minimum:	.....	2.646
Max d/D:	.....	35.1%

Velocity - Feet per Second

Average:	.....	1.257
Maximum:	.....	1.894
Minimum:	.....	0.471

Flow Rate - Gallons Per Minute

Average:	.....	77.095
Maximum:	.....	189.301
Minimum:	.....	9.432
Peak to Average	.....	2.33



— Maximum Level

— Maximum Velocity

— Maximum Flow Rate

Sewer Line Daily Totals

Project: City of McFarland, Sewer Flow Study

Location: MH-7084

Pipe Size: 12" VCP

Time Period: 7/26/2023, 12:00 a.m. - 8/9/2023, 12:00 a.m.

Daily Totals - US Gallons

Date:	Gallons:
7/26/2023	108,775
7/27/2023	109,520
7/28/2023	106,170
7/29/2023	113,565
7/30/2023	118,993
7/31/2023	107,208
8/1/2023	110,026
8/2/2023	109,690
8/3/2023	107,592
8/4/2023	105,199
8/5/2023	112,288
8/6/2023	132,339
8/7/2023	110,749
8/8/2023	109,335
8/9/2023	103,805
Total Recorded Flow (15 Days)	1,665,250

Project: City of McFarland - Sewer Flow Study
Manhole Location: MH-7084

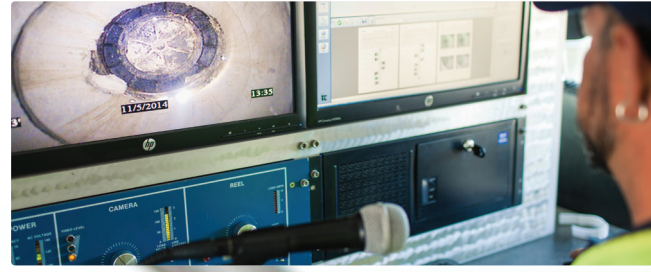
Tuesday - A.M. 8/8/2023

Tuesday - P.M. 8/8/2023

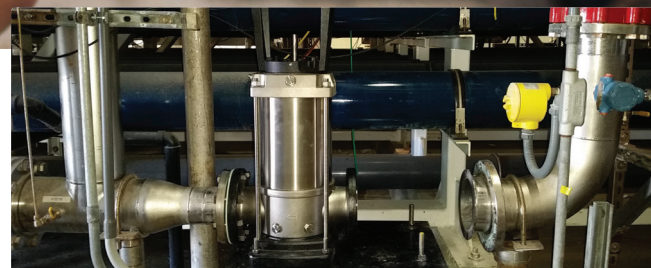
Time	Level	Velocity	Flow	Time	Level	Velocity	Flow
12:00:00 AM	2.619	1.309	71.73	12:00:00 PM	2.462	1.291	66.319
12:15:00 AM	2.277	1.161	54.041	12:15:00 PM	2.379	1.18	58.477
12:30:00 AM	2.269	1.189	54.401	12:30:00 PM	2.531	1.334	67.675
12:45:00 AM	2.216	1.117	45.878	12:45:00 PM	2.465	1.271	66.285
1:00:00 AM	1.874	1.005	35.339	1:00:00 PM	2.651	1.39	80.409
1:15:00 AM	1.877	1.245	43.677	1:15:00 PM	2.363	1.134	55.651
1:30:00 AM	1.903	1.072	37.52	1:30:00 PM	2.455	1.262	65.451
1:45:00 AM	1.726	0.993	30.982	1:45:00 PM	2.444	1.275	59.72
2:00:00 AM	1.548	0.839	22.345	2:00:00 PM	2.257	1.301	59.8
2:15:00 AM	1.515	0.967	24.858	2:15:00 PM	2.382	1.241	61.608
2:30:00 AM	1.489	0.756	18.243	2:30:00 PM	2.541	1.208	65.739
2:45:00 AM	1.513	0.932	22.354	2:45:00 PM	2.555	1.252	68.677
3:00:00 AM	1.531	0.897	23.497	3:00:00 PM	2.715	1.314	77.261
3:15:00 AM	1.407	0.726	16.818	3:15:00 PM	2.886	1.408	91.846
3:30:00 AM	1.437	0.964	22.82	3:30:00 PM	2.804	1.575	97.918
3:45:00 AM	1.518	0.9	23.289	3:45:00 PM	2.991	1.388	93.552
4:00:00 AM	1.559	0.892	24.017	4:00:00 PM	3.024	1.385	93.829
4:15:00 AM	1.733	1.05	32.941	4:15:00 PM	3.079	1.508	107.821
4:30:00 AM	1.641	0.986	27.677	4:30:00 PM	2.873	1.461	94.728
4:45:00 AM	2.026	1.216	47.833	4:45:00 PM	2.993	1.422	97.697
5:00:00 AM	1.934	1.136	41.792	5:00:00 PM	3.114	1.576	114.472
5:15:00 AM	2.106	1.21	48.889	5:15:00 PM	3.364	1.714	137.008
5:30:00 AM	2.126	1.164	49.091	5:30:00 PM	3.443	1.452	119.381
5:45:00 AM	2.049	1.202	45.404	5:45:00 PM	3.421	1.428	114.944
6:00:00 AM	2.323	1.209	57.916	6:00:00 PM	3.193	1.483	111.609
6:15:00 AM	2.112	1.235	51.324	6:15:00 PM	3.048	1.503	105.941
6:30:00 AM	2.163	1.12	47.674	6:30:00 PM	3.258	1.5	116.095
6:45:00 AM	2.668	1.369	77.863	6:45:00 PM	3.24	1.488	114.257
7:00:00 AM	2.986	1.438	98.456	7:00:00 PM	3.077	1.415	101.043
7:15:00 AM	2.905	1.583	104.235	7:15:00 PM	2.999	1.406	96.815
7:30:00 AM	2.924	1.371	91.155	7:30:00 PM	3.117	1.502	109.235
7:45:00 AM	2.903	1.639	107.791	7:45:00 PM	3.31	1.566	123.862
8:00:00 AM	2.83	1.551	96.194	8:00:00 PM	3.351	1.677	134.263
8:15:00 AM	2.839	1.36	86.715	8:15:00 PM	3.308	1.539	121.682
8:30:00 AM	2.494	1.284	66.815	8:30:00 PM	3.312	1.527	118.446
8:45:00 AM	2.261	1.372	63.227	8:45:00 PM	3.506	1.494	122.406
9:00:00 AM	2.232	1.298	58.713	9:00:00 PM	3.809	1.725	164.811
9:15:00 AM	2.236	1.288	57.037	9:15:00 PM	3.911	1.633	160.678
9:30:00 AM	2.237	1.171	50.646	9:30:00 PM	3.813	1.663	158.442
9:45:00 AM	2.111	1.183	47.682	9:45:00 PM	3.755	1.525	140.895
10:00:00 AM	1.943	1.046	36.773	10:00:00 PM	4.087	1.616	171.227
10:15:00 AM	2.135	1.12	47.52	10:15:00 PM	3.931	1.587	153.286
10:30:00 AM	2.1	1.174	47.348	10:30:00 PM	3.738	1.584	148.413
10:45:00 AM	2.378	1.237	61.228	10:45:00 PM	3.446	1.416	113.329
11:00:00 AM	2.402	1.301	65.195	11:00:00 PM	3.244	1.489	114.55
11:15:00 AM	2.451	1.259	65.093	11:15:00 PM	2.993	1.305	89.673
11:30:00 AM	2.378	1.23	57.299	11:30:00 PM	2.969	1.447	98.291
11:45:00 AM	2.524	1.28	69.031	11:45:00 PM	2.697	1.291	76.362
				Inches	Feet/Sec	GPM	
Daily Avg:				2.601	1.304	77.774	
Daily Min:				1.407	0.726	16.818	
Daily Max:				4.087	1.725	171.227	
Peak to Avg:						2.20	

APPENDIX B - DSI SEWER CCTV INSPECTION REPORT (ABBREVIATED)

Sewer CCTV Inspections
12.04.2023 to 12.08.2023



City of McFarland Sewer CCTV Inspections



PACP CONDITION GRADING SYSTEM

From the Pipeline Assessment Certification Program Handbook, Version 7.0.2 September 2016, page C-1.
Colors added to match reporting software.

Using the PACP Code Matrix, each PACP code is assigned a condition grade ranging from 1 to 5. Grades are assigned based on the significance of the defect, extent of damage, percentage of restriction to flow capacity or the amount of wall loss due to deterioration.

Note: The PACP Condition Grading System alone is inadequate for determining if a pipe segment should be rehabilitated or replaced. Many other factors in addition to the internal condition of the segment should be considered. The fact that a segment has significant grade 4 or grade 5 defects does not necessarily mean the pipe segment should be immediately rehabilitated, thus PACP does not replace the judgment of professional engineers.

CONDITION GRADES

Condition Grades are assigned for two defects categories, structural and operation and maintenance (O&M). Grades and definitions are listed below:

- 5 – MOST SIGNIFICANT DEFECT GRADE
- 4 – SIGNIFICANT DEFECT GRADE
- 3 – MODERATE DEFECT GRADE
- 2 – MINOR TO MODERATE DEFECT GRADE
- 1 – MINOR DEFECT GRADE



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PACP QUICK RATING

From the Pipeline Assessment Certification Program Handbook, Version 7.0.2 September 2016, page C-3.

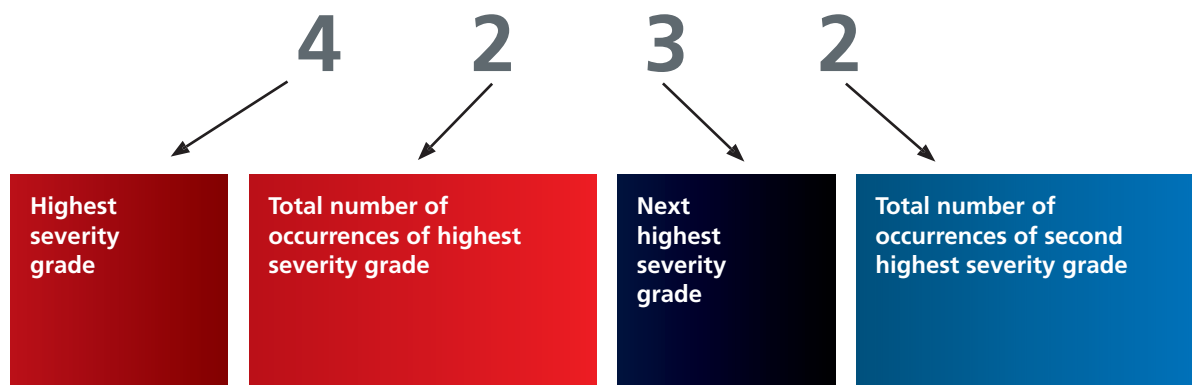
The PACP Quick Rating is a shorthand way of expressing the number of occurrences for the two highest severity grades. The quick rating is a four character score compiled as follows:

First Character: Highest severity grade occurring along the pipe length.

Second Character: Total number of occurrences of that highest severity grade. If the total number exceeds 9, then alphabetic characters are used as follows:
10 to 14=A, 15 to 19=B and 20 to 24=C, etc.

Third Character: Second highest severity grade occurring along the pipe length.

Fourth Character: Total number of the second highest severity grade occurrences. If the total number exceeds 9, then alphabetic characters are used as follows:
10 to 14=A, 15 to 19=B and 20 to 24=C, etc.



FOR EXAMPLE: 4B27

This immediately shows no grade 5 defects or grade 3 defects were observed.

However, fifteen to nineteen grade 4 defects and seven grade 2 defects were found.

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Appendix B - Color Coded Chart

NASSCO'S PIPELINE ASSESSMENT CERTIFICATION PROGRAM® (PACP®)

Section 4 — Structural Defect Coding

C CRACK 4-3 CL Longitudinal CC Circumferential CM Multiple CS Spiral CH Hinge (2, 3, 4)	F FRACTURE 4-9 FL Longitudinal FC Circumferential FM Multiple FS Spiral FH Hinge (2, 3, 4)	B BROKEN 4-17 BSV Soil Visible BVV Void Visible	H HOLE 4-21 HSV Soil Visible HVV Void Visible	D DEFORMED 4-25 (Rigid) DR Deformed Rigid No modifiers used.	D DEFORMED 4-25 (Flexible) DFBR Bulging Round DFBI Bulging Inv.Curv. DFC Creasing DFE Elliptical	D DEFORMED 4-25 (Brick) DTBR Bulging Round DTBI Bulging Inv.Curv.
X COLLAPSE 4-37 X Collapse No descriptors and no modifiers used.	J JOINT 4-43 JOS Offset Small JOM Offset Medium JOL Offset Large	J JOINT 4-43 JOSD Offset Small Defect JOMD Offset Medium Defect JOLD Offset Large Defect	J JOINT 4-43 JSS Separation Small JSM Separation Med. JSL Separation Large	J JOINT 4-43 JAS Angular Small JAM Angular Medium JAL Angular Large	S SURFACE DAMAGE 4-51 SRI Roughness Increased SAV Aggregate Visible SAP Aggregate Projecting SAM Aggregate Missing	S SURFACE DAMAGE 4-51 SRV Reinforcement Visible SRP Reinforcemt.Projecting SRC Reinforcemt.Corroded SMW Missing Wall
S SURFACE DAMAGE 4-51 SSS Surface Spalling SSC Surface Spalling Coating SCP Chemical Attack SZ Other	LF LINING FEATURES 4-67 LFAC Abdn'd Connection LFAS Annular Space LFB Blistered Lining LFCS Service Cut Shifted	LF LINING FEATURES 4-67 LFD Detached LFDC Discoloration LFDE Defective End LFDL Delamination	LF LINING FEATURES 4-67 LFOC Overcut Service LFRS Resin Slug LFUC Undercut Service LFW Wrinkled LFZ Other	WF WELD FAILURE 4-85 WFC Circumferential WFL Longitudinal WFM Multiple WFS Spiral WFZ Other	RP POINT REPAIR 4-89 RPL Liner RPLD Liner Defective RPP Patch RPPD Patch Defective	RP POINT REPAIR 4-89 RPR Replacement RPRD Replmt. Defective RPZ Other RPZD Other Defective
BRICKWORK 4-97 DB Displaced MB Missing DI Dropped Invert	BRICKWORK 4-97 MMS Mortar Missing Small MMM Mortar Missing Med. MML Mortar Missing Large					



Appendix B - Color Coded Chart

NASSCO'S PIPELINE ASSESSMENT CERTIFICATION PROGRAM® (PACP)®

Section 5 — Operation and Maintenance

D DEPOSITS 5-3 (Attached) DAE Encrustation DAGS Grease DAR Ragging DAZ Other	D DEPOSITS 5-4 (Settled) DSF Fine DSGV Gravel DSC Hard/Compact DSZ Other	D DEPOSITS 5-4 (Ingress) DNF Fine (silt/sand) DNGV Gravel DNZ Other	R ROOTS 5-11 (Fine) RFB Barrel RFL Lateral RFC Connection RFJ Joint	R ROOTS 5-11 (Medium) RMB Barrel RML Lateral RMC Connection RMJ Joint	R ROOTS 5-11 (Ball) RBB Barrel RBL Lateral RBC Connection RBJ Joint	R ROOTS 5-11 (Tap) RTB Barrel RTL Lateral RTC Connection RTJ Joint
I INFILTRATION 5-19 IS Stain ISB Barrel ISC Connection ISJ Joint ISL Lateral	I INFILTRATION 5-19 IW Weeper IWB Barrel IWC Connection IWJ Joint IWL Lateral	I INFILTRATION 5-19 ID Dripper IDB Barrel IDC Connection IDJ Joint IDL Lateral	I INFILTRATION 5-19 IR Runner IRB Barrel IRC Connection IRJ Joint IRL Lateral	I INFILTRATION 5-19 IG Gusher IGB Barrel IGC Connection IGJ Joint IGL Lateral	OB OBSTACLES 5-31 OBSTRUCTIONS OBB Brick or Masonry OBC Object Through Connection OBI Object Intruding Through Wall	OB OBSTACLES 5-31 OBSTRUCTIONS OBJ Object in Joint OBM Pipe Material in Invert OBN Construction Debris OBP External Pipe Cable
OB OBSTACLES 5-31 OBSTRUCTIONS OBR Rocks OBS Built In Structure OBZ Other	V VERMIN 5-45 VR Rat VC Cockroach VZ Other	G GROUT TEST 5-49 & SEAL GTP Grout Test Passed GTPJ Joint GTPL Lateral GTF Grout Test Failed GTFJ Joint GTFL Lateral	G GROUT TEST 5-49 & SEAL GTU Grout Test Unable GTUJ Joint GTUL Lateral GRT Grout Test Location			

Section 6 — Construction Features

T TAP 6-3 TB Break-In/Hammer TBI Intruding TBD Defective TBC Capped TBA Activity TBB Abandoned	T TAP 6-3 TF Factory Made TFI Intruding TFD Defective TFC Capped TFA Activity TFB Abandoned	T TAP 6-3 TR Rehabilitated TRI Intruding TRD Defective TRC Capped TRA Activity TRB Abandoned	T TAP 6-3 TS Saddle TSI Intruding TSD Defective TSC Capped TSA Activity TSB Abandoned	IS INTRUDING SEALING MATERIAL 6-15 ISSR Sealing Ring ISSRB Broken ISSRH Hanging ISSRL Loose ISGT Grout ISZ Other	M MISCELLANEOUS FEATURES 7-1 MCU Camera Underwater MGO General Observation MGP General Photograph MJL Joint Length	
L LINE 6-21 (of sewer) LD Down LL Left LLD Left Down LLU Left Up	L LINE 6-21 (of sewer) LR Right LRD Right Down LRU Right Up LU Up	A ACCESS POINT 6-25 ACB Catch Basin ACO Cleanout ACOM Mainline ACOP Property ACOH House	A ACCESS POINT 6-25 ADP Discharge Point AEP End of Pipe AJB Junction Box AM Meter AMH Manhole	A ACCESS POINT 6-25 AOC Other Structure ATC Tee Connection AWA Wastewater Access AWW Wetwell AZ Other	M MISCELLANEOUS FEATURES 7-1 MLC Lining Change MMC Material Change MSC Shape/Size Change MSA Survey Abandoned MWL Water Level	M MISCELLANEOUS FEATURES 7-1 MWLS Water Level Sag MWM Water Mark MY Dye Test MYV Dye Visible MYN Not Visible

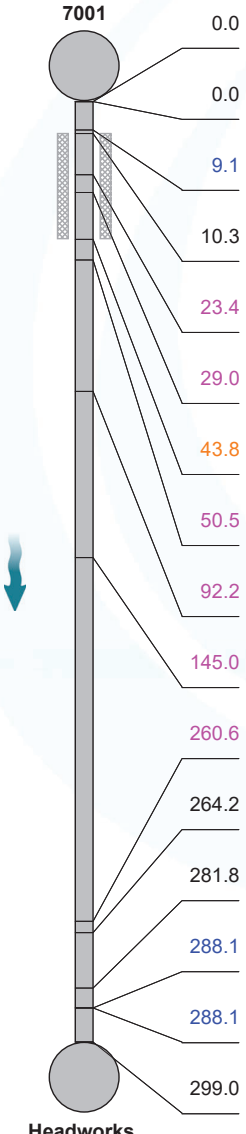
Section 7 — Miscellaneous Features

Inspection report

Date: 12/8/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7001 - Headworks
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 299.00 '	Length Surveyed: 299.00 '

City: McFarland	Drainage Area:	Upstream MH: 7001
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: Headworks
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2257	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7001				
	0.0	MWL	Water Level, 25% of the vertical dimension				
	9.1	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch	M2			
	10.3	S01 MWLS	Miscellaneous Water Level, Sag, 40% of the vertical dimension, Start				
	23.4	FM	Fracture Multiple from 2 o'clock to 4 o'clock, within 8 inch	S4			
	29.0	FM	Fracture Multiple from 9 o'clock to 2 o'clock, within 8 inch	S4			
	43.8	F01 MWLS	Miscellaneous Water Level, Sag, 40% of the vertical dimension, Finish	S3			
	50.5	FM	Fracture Multiple from 10 o'clock to 1 o'clock, within 8 inch	S4			
	92.2	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4			
	145.0	FM	Fracture Multiple from 8 o'clock to 11 o'clock, within 8 inch	S4			
	260.6	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4			
	264.2	MWL	Water Level, 30% of the vertical dimension				
	281.8	MWL	Water Level, 20% of the vertical dimension				
	288.1	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 10 o'clock, within 8 inch	M2			
	288.1	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch	M2			
299.0	AMH	Manhole / Headworks					
Headworks							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4637	2300	45.0	6.0	51.0	3.5	2.0	3.2

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7003 - 7001
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 496.10'	Length Surveyed: 496.10'

City: McFarland	Drainage Area:	Upstream MH: 7003
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7001
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18"	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

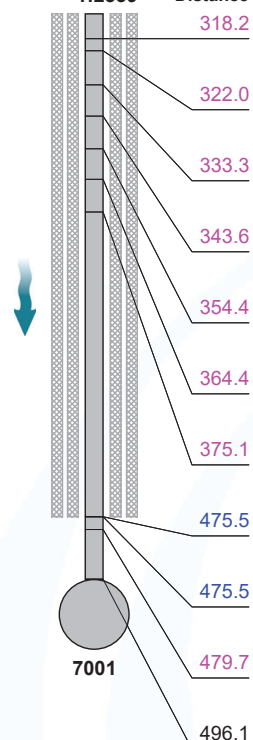
Additional Info:

1:2339	Distance	Code	Observation	Grade
7003	0.0	AMH	Manhole / 7003	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	5.5	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 8 o'clock, within 8 inch	M2
	8.4	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	12.7	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 8 o'clock, within 8 inch	M2
	19.3	FM	Fracture Multiple from 8 o'clock to 5 o'clock, within 8 inch	S4
	35.1	S01	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Start
	35.1	S02	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start
	62.9	SMW	Surface Damage Missing Wall at 12 o'clock, within 8 inch	S5
	71.0	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	93.0	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	208.1	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	271.3	F02	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish
	286.9	FS	Fracture Spiral from 1 o'clock to 2 o'clock, within 8 inch	S3
	291.0	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	301.4	S03	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7003 - 7001
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 496.10'	Length Surveyed: 496.10'

1:2339	Distance	Code	Observation	Grade
	318.2	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	322.0	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	333.3	FM	Fracture Multiple from 9 o'clock to 11 o'clock, within 8 inch	S4
	343.6	FM	Fracture Multiple from 11 o'clock to 4 o'clock, within 8 inch	S4
	354.4	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	364.4	FM	Fracture Multiple from 9 o'clock to 2 o'clock, within 8 inch	S4
	375.1	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	475.5	F03 DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish	M2
	475.5	F01 DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Finish	M2
	479.7	FM	Fracture Multiple from 12 o'clock to 2 o'clock, within 8 inch	S4
	496.1	AMH	Manhole / 7001	



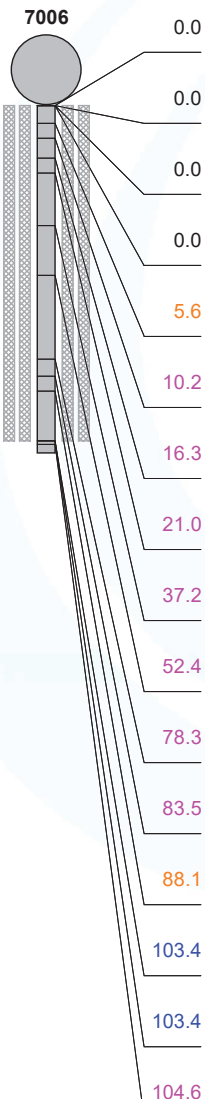
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
514A	2Z00	64.0	344.0	408.0	4.0	2.0	2.2

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7006 - 7003
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 674.90 '	Length Surveyed: 674.90 '

City: McFarland	Drainage Area:	Upstream MH: 7006
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7003
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2190	Distance	Code	Observation	Grade
7006	0.0	AMH	Manhole / 7006	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	0.0	S01	DAGS Deposits Attached Grease, 10% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Start	
	0.0	S02	DAGS Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start	
	5.6	FS	Fracture Spiral from 1 o'clock to 2 o'clock, within 8 inch	S3
	10.2	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	16.3	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	21.0	FM	Fracture Multiple from 11 o'clock to 1 o'clock, within 8 inch	S4
	37.2	FM	Fracture Multiple from 11 o'clock to 2 o'clock, within 8 inch	S4
	52.4	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	78.3	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	83.5	FM	Fracture Multiple from 11 o'clock to 2 o'clock, within 8 inch	S4
	88.1	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
	103.4	F02	DAGS Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish	M2
	103.4	F01	DAGS Deposits Attached Grease, 10% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Finish	M2
	104.6	FM	Fracture Multiple from 8 o'clock to 2 o'clock, within 8 inch	S4

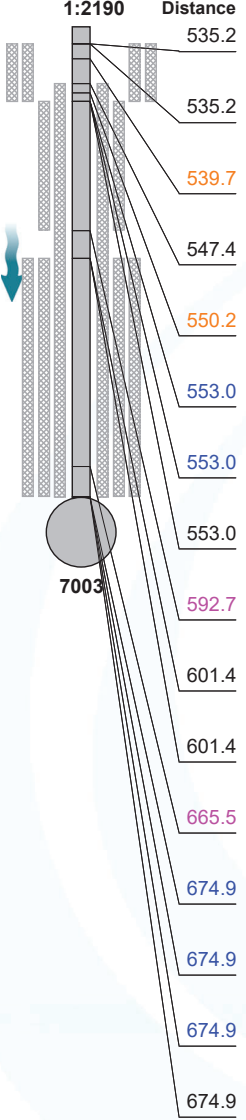
Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7006 - 7003
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 674.90 '	Length Surveyed: 674.90 '

1:2190	Distance	Code	Observation	Grade
	109.7	FL	Fracture Longitudinal at 2 o'clock, within 8 inch	S3
	115.2	FM	Fracture Multiple from 11 o'clock to 5 o'clock, within 8 inch	S4
	119.5	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	125.2	FS	Fracture Spiral from 10 o'clock to 2 o'clock, within 8 inch	S3
	135.9	FM	Fracture Multiple from 12 o'clock to 4 o'clock, within 8 inch	S4
	140.3	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	147.0	FM	Fracture Multiple from 11 o'clock to 2 o'clock, within 8 inch	S4
	152.1	FM	Fracture Multiple from 11 o'clock to 1 o'clock, within 8 inch	S4
	156.4	S03 FM	Fracture Multiple from 7 o'clock to 5 o'clock, within 8 inch, Start / Wandering	S4
	219.9	F03 FM	Fracture Multiple from 7 o'clock to 5 o'clock, within 8 inch, Finish / Wandering	S4
	225.5	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	230.8	FS	Fracture Spiral from 1 o'clock to 2 o'clock, within 8 inch	S3
	234.1	FM	Fracture Multiple from 9 o'clock to 4 o'clock	S4
	239.9	S04 FM	Fracture Multiple from 7 o'clock to 5 o'clock, within 8 inch, Start / Wandering	S4
	450.6	F04 FM	Fracture Multiple from 7 o'clock to 5 o'clock, within 8 inch, Finish / Wandering	S4
	473.6	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock	M2
	502.9	FS	Fracture Spiral from 1 o'clock to 2 o'clock, within 8 inch	S3
	508.5	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	512.5	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	524.4	FM	Fracture Multiple from 10 o'clock to 11 o'clock, within 8 inch	S4

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7006 - 7003
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 674.90 '	Length Surveyed: 674.90 '

	1:2190	Distance	Code	Observation	Grade		
		535.2	S05	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Start		
		535.2	S06	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start		
		539.7	FS	Fracture Spiral from 2 o'clock to 3 o'clock, within 8 inch	S3		
		547.4	S07	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Start		
		550.2	FS	Fracture Spiral from 3 o'clock to 4 o'clock, within 8 inch	S3		
		553.0	F05	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Finish	M2	
		553.0	F06	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish	M2	
		553.0	S08	RPRD	Point Repair Replacement Defective, within 8 inch, Start / PVC , JOL		
		592.7	F08	RPRD	Point Repair Replacement Defective, within 8 inch, Finish / PVC , JOL	S4	
		601.4	S09	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start		
		601.4	S10	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start		
		665.5	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4		
		674.9	F07	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Finish	S2	
		674.9	F09	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2	
		674.9	F10	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2	
	674.9	AMH	Manhole / 7003				
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4038	2000	408.0	162.0	570.0	3.5	2.0	2.9

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7008 - 7006
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 675.80 '	Length Surveyed: 675.80 '

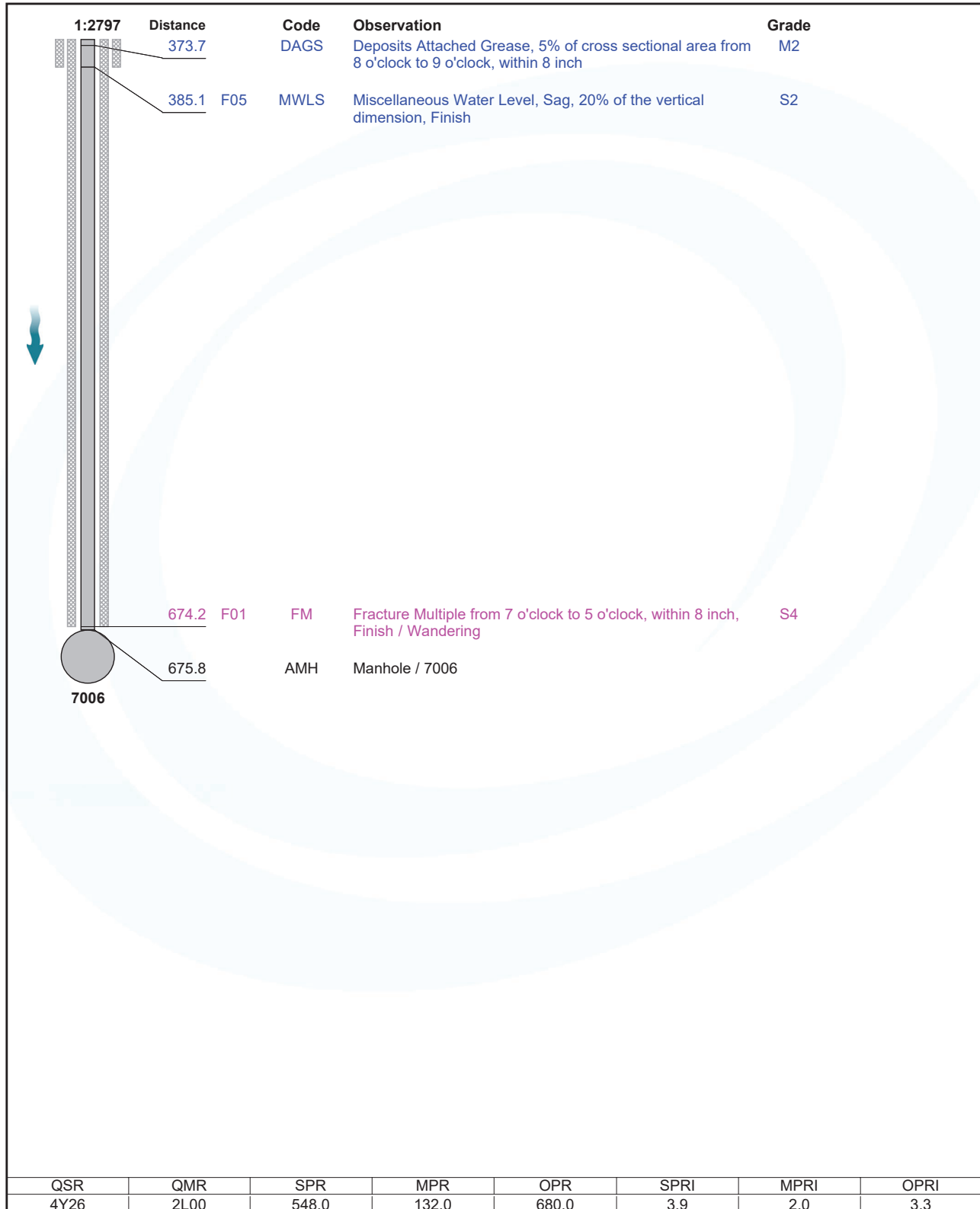
City: McFarland	Drainage Area:	Upstream MH: 7008
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7006
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2797	Distance	Code	Observation	Grade
7008	0.0	AMH	Manhole / 7008	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	1.5	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	8.0	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	14.0	S01 FM	Fracture Multiple from 7 o'clock to 5 o'clock, within 8 inch, Start / Wandering	
	34.5	S02 DAGS	Deposits Attached Grease, 5% of cross sectional area from 2 o'clock to 4 o'clock, within 8 inch, Start	
	34.5	S03 DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 10 o'clock, within 8 inch, Start	
	120.1	F02 DAGS	Deposits Attached Grease, 5% of cross sectional area from 2 o'clock to 4 o'clock, within 8 inch, Finish	M2
	120.1	F03 DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 10 o'clock, within 8 inch, Finish	M2
	149.1	S04 DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	283.9	MWL	Water Level, 15% of the vertical dimension	
	293.6	OBJ	Obstruction Wedged In The Joint, 10% of cross sectional area from 4 o'clock to 8 o'clock, within 8 inch	M2
	293.9	F04 DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	301.7	MWL	Water Level, 10% of the vertical dimension	
	356.5	S05 MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Start	
	367.5	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch	M2

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7008 - 7006
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 675.80 '	Length Surveyed: 675.80 '



Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7010 - 7008
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 229.50 '	Length Surveyed: 229.50 '

City: McFarland	Drainage Area:	Upstream MH: 7010
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7008
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:708	Distance	Code	Observation	Grade
7010	0.0	AMH	Manhole / 7010	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	1.3	FS	Fracture Spiral from 1 o'clock to 3 o'clock, within 8 inch	S3
	4.0	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	9.6	FL	Fracture Longitudinal at 10 o'clock, within 8 inch	S3
	29.9	FM	Fracture Multiple from 9 o'clock to 2 o'clock, within 8 inch	S4
	34.0	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	39.1	FL	Fracture Longitudinal at 12 o'clock, within 8 inch	S3
	43.2	FL	Fracture Longitudinal at 9 o'clock, within 8 inch	S3
	43.2	FL	Fracture Longitudinal at 1 o'clock, within 8 inch	S3
	55.7	FS	Fracture Spiral from 12 o'clock to 4 o'clock, within 8 inch	S3
	66.3	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	72.3	FS	Fracture Spiral from 7 o'clock to 10 o'clock, within 8 inch	S3
	76.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	89.0	FS	Fracture Spiral from 11 o'clock to 3 o'clock, within 8 inch	S3
	91.7	FS	Fracture Spiral from 12 o'clock to 3 o'clock, within 8 inch	S3

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7010 - 7008
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 229.50 '	Length Surveyed: 229.50 '

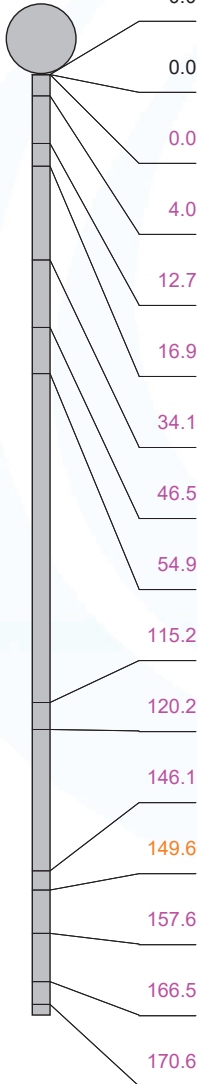


Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7012 - 7010
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 446.10'	Length Surveyed: 446.10'

City: McFarland	Drainage Area:	Upstream MH: 7012
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7010
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18"	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1303	Distance	Code	Observation	Grade
7012	0.0	AMH	Manhole / 7012	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	0.0	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	4.0	FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4
	12.7	FM	Fracture Multiple from 8 o'clock to 2 o'clock, within 8 inch	S4
	16.9	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	34.1	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	46.5	FM	Fracture Multiple from 10 o'clock to 2 o'clock	S4
	54.9	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	115.2	FM	Fracture Multiple from 11 o'clock to 4 o'clock, within 8 inch	S4
	120.2	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	146.1	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	149.6	FS	Fracture Spiral from 9 o'clock to 11 o'clock, within 8 inch	S3
	157.6	FM	Fracture Multiple from 7 o'clock to 10 o'clock, within 8 inch	S4
	166.5	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	170.6	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7012 - 7010
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 446.10'	Length Surveyed: 446.10'

1:1303	Distance	Code	Observation	Grade
	174.6	FS	Fracture Spiral from 11 o'clock to 2 o'clock, within 8 inch	S3
	186.9	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	191.4	FM	Fracture Multiple from 9 o'clock to 2 o'clock, within 8 inch	S4
	195.7	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	199.3	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	204.2	FS	Fracture Spiral from 12 o'clock to 2 o'clock, within 8 inch	S3
	208.1	FM	Fracture Multiple from 9 o'clock to 2 o'clock, within 8 inch	S4
	212.1	BSV	Broken Soil Visible from 11 o'clock to 12 o'clock, within 8 inch	S5
	223.4	FS	Fracture Spiral from 1 o'clock to 3 o'clock, within 8 inch	S3
	228.6	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	232.5	FS	Fracture Spiral from 12 o'clock to 2 o'clock, within 8 inch	S3
	249.7	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	252.3	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	294.5	CL	Crack Longitudinal at 3 o'clock, within 8 inch	S2
	298.7	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	302.9	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	319.3	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	327.5	FM	Fracture Multiple from 11 o'clock to 3 o'clock, within 8 inch	S4
	344.0	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	347.9	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7012 - 7010
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 446.10'	Length Surveyed: 446.10'

1:1303

Distance

352.8

356.9 S01

393.0

441.4 F01

446.1

7010

Code

FL

FM

B

FM

AMH

Observation

Fracture Longitudinal at 11 o'clock, within 8 inch

Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Start / Wandering

Broken from 10 o'clock to 4 o'clock, within 8 inch

Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Finish / Wandering

Manhole / 7010

Grade

S3

S4

S4

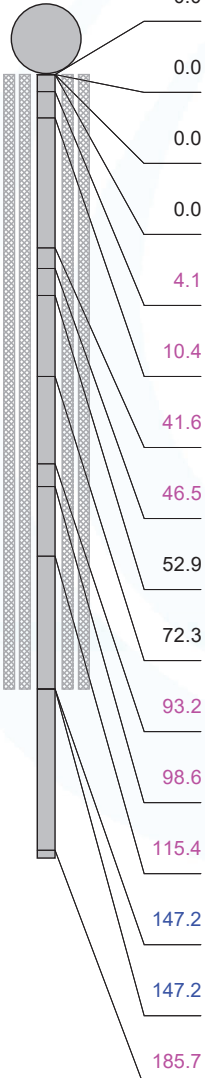
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
514H	0000	205.0	0.0	205.0	3.9	0.0	3.9

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7014 - 7012
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 676.10'	Length Surveyed: 676.10'

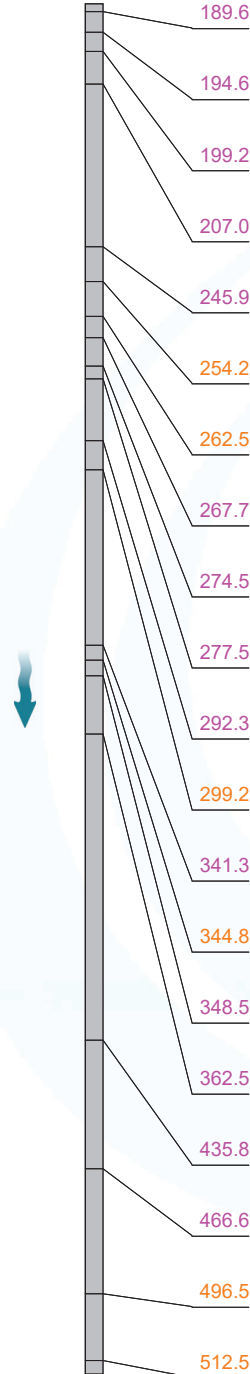
City: McFarland	Drainage Area:	Upstream MH: 7014
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7012
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18"	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1700	Distance	Code	Observation	Grade
7014	0.0	AMH	Manhole / 7014	
	0.0	MWL	Water Level, 20% of the vertical dimension	
	0.0	S01	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start / Wandering	
	0.0	S02	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Start / Wandering	
	4.1	FM	Fracture Multiple from 8 o'clock to 4 o'clock	S4
	10.4	FM	Fracture Multiple from 11 o'clock to 3 o'clock, within 8 inch	S4
	41.6	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	46.5	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	52.9	MWL	Water Level, 10% of the vertical dimension	
	72.3	MWL	Water Level, 15% of the vertical dimension	
	93.2	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	98.6	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	115.4	FM	Fracture Multiple from 11 o'clock to 4 o'clock, within 8 inch	S4
	147.2	F01	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish / Wandering	M2
	147.2	F02	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Finish / Wandering	M2
	185.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4

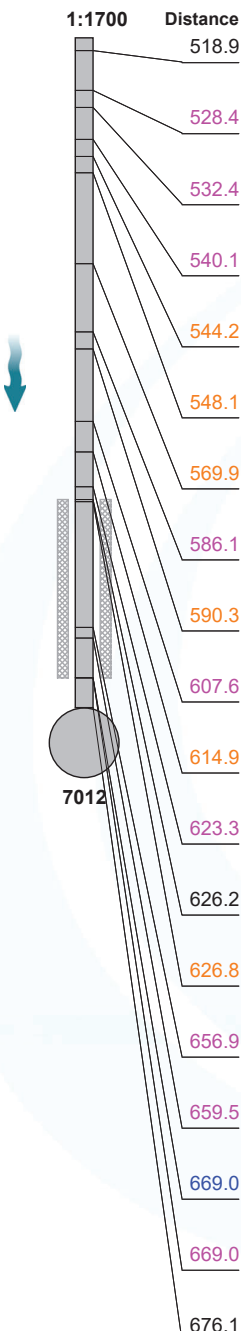
Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7014 - 7012
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 676.10'	Length Surveyed: 676.10'

1:1700	Distance	Code	Observation	Grade
	189.6	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	194.6	FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4
	199.2	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	207.0	FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4
	245.9	FM	Fracture Multiple from 8 o'clock to 2 o'clock, within 8 inch	S4
	254.2	FS	Fracture Spiral from 10 o'clock to 12 o'clock, within 8 inch	S3
	262.5	FS	Fracture Spiral from 9 o'clock to 10 o'clock, within 8 inch	S3
	267.7	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	274.5	FM	Fracture Multiple from 8 o'clock to 2 o'clock, within 8 inch	S4
	277.5	FM	Fracture Multiple from 9 o'clock to 1 o'clock, within 8 inch	S4
	292.3	B	Broken from 10 o'clock to 2 o'clock, within 8 inch	S4
	299.2	FS	Fracture Spiral from 7 o'clock to 9 o'clock, within 8 inch	S3
	341.3	B	Broken from 8 o'clock to 12 o'clock, within 8 inch	S4
	344.8	FS	Fracture Spiral from 8 o'clock to 9 o'clock, within 8 inch	S3
	348.5	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	362.5	B	Broken from 10 o'clock to 2 o'clock, within 8 inch	S4
	435.8	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	466.6	FM	Fracture Multiple from 2 o'clock to 5 o'clock, within 8 inch	S4
	496.5	FS	Fracture Spiral from 10 o'clock to 1 o'clock, within 8 inch	S3
	512.5	FS	Fracture Spiral from 10 o'clock to 4 o'clock, within 8 inch	S3

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7014 - 7012
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 676.10'	Length Surveyed: 676.10'

	1:1700	Distance	Code	Observation	Grade
		518.9	MWL	Water Level, 10% of the vertical dimension	
		528.4	B	Broken from 11 o'clock to 12 o'clock, within 8 inch	S4
		532.4	FM	Fracture Multiple from 7 o'clock to 10 o'clock, within 8 inch	S4
		540.1	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
		544.2	FS	Fracture Spiral from 11 o'clock to 2 o'clock, within 8 inch	S3
		548.1	FS	Fracture Spiral from 12 o'clock to 2 o'clock, within 8 inch	S3
		569.9	FS	Fracture Spiral from 10 o'clock to 12 o'clock, within 8 inch	S3
		586.1	FM	Fracture Multiple from 12 o'clock to 2 o'clock, within 8 inch	S4
		590.3	FS	Fracture Spiral from 8 o'clock to 10 o'clock, within 8 inch	S3
		607.6	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
		614.9	FS	Fracture Spiral from 9 o'clock to 12 o'clock, within 8 inch	S3
		623.3	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
		626.2	S03 MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Start	
		626.8	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
		656.9	FM	Fracture Multiple from 10 o'clock to 1 o'clock, within 8 inch	S4
		659.5	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
		669.0	F03 MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Finish	S2
	669.0	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4	
	676.1	AMH	Manhole / 7012		

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4E3A	2J00	178.0	116.0	294.0	3.4	2.0	2.7

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7016 - 7014
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.00'	Length Surveyed: 678.00'

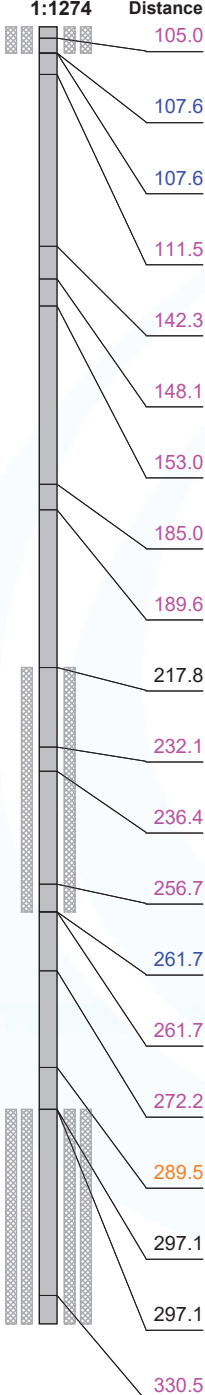
City: McFarland	Drainage Area:	Upstream MH: 7016
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7014
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18"	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1274	Distance	Code	Observation	Grade
7016	0.0	AMH	Manhole / 7016	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	10.7	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	25.5	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	31.8	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	42.9	B	Broken from 8 o'clock to 4 o'clock, within 8 inch	S4
	45.8 S01	DAGS	Deposits Attached Grease, 5% of cross sectional area from 4 o'clock to 5 o'clock, within 8 inch, Start	
	45.8 S02	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 8 o'clock, within 8 inch, Start	
	48.9	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	52.4	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	62.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	74.1	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	79.9	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	85.7	FM	Fracture Multiple from 12 o'clock to 3 o'clock, within 8 inch	S4
	91.1	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
	100.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7016 - 7014
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.00'	Length Surveyed: 678.00'

1:1274	Distance		Code	Observation	Grade
	105.0		FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	107.6	F01	DAGS	Deposits Attached Grease, 5% of cross sectional area from 4 o'clock to 5 o'clock, within 8 inch, Finish	M2
	107.6	F02	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 8 o'clock, within 8 inch, Finish	M2
	111.5		FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	142.3		FM	Fracture Multiple from 12 o'clock to 4 o'clock, within 8 inch	S4
	148.1		FM	Fracture Multiple from 8 o'clock to 5 o'clock, within 8 inch	S4
	153.0		B	Broken from 1 o'clock to 4 o'clock, within 8 inch	S4
	185.0		FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	189.6		FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4
	217.8	S03	MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Start	
	232.1		FM	Fracture Multiple from 9 o'clock to 1 o'clock, within 8 inch	S4
	236.4		FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	256.7		FM	Fracture Multiple from 9 o'clock to 2 o'clock, within 8 inch	S4
	261.7	F03	MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Finish	S2
	261.7		FM	Fracture Multiple from 8 o'clock to 12 o'clock, within 8 inch	S4
	272.2		FM	Fracture Multiple from 8 o'clock to 3 o'clock, within 8 inch	S4
	289.5		FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
	297.1	S04	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start / Wandering	
	297.1	S05	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Start / Wandering	
	330.5		FM	Fracture Multiple from 12 o'clock to 4 o'clock, within 8 inch	S4

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7016 - 7014
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.00'	Length Surveyed: 678.00'

1:1274	Distance	Code	Observation	Grade
	340.7	S06	MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Start
	346.7	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
	399.2	FS	Fracture Spiral from 10 o'clock to 11 o'clock, within 8 inch	S3
	414.7	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	419.4	FM	Fracture Multiple from 11 o'clock to 3 o'clock, within 8 inch	S4
	430.2	FS	Fracture Spiral from 7 o'clock to 10 o'clock, within 8 inch	S3
	440.2	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
	456.4	FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4
	460.9	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	463.5	F04	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish / Wandering
	463.5	F06	MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Finish
	463.5	F05	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Finish / Wandering
	466.0	FM	Fracture Multiple from 8 o'clock to 1 o'clock, within 8 inch	S4
	476.7	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	491.7	FM	Fracture Multiple from 8 o'clock to 3 o'clock, within 8 inch	S4
	518.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	537.4	S08	MWLS	Miscellaneous Water Level, Sag, 35% of the vertical dimension, Start
	543.7	FM	Fracture Multiple from 8 o'clock to 2 o'clock, within 8 inch	S4
	570.6	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	570.6	F08	MWLS	Miscellaneous Water Level, Sag, 35% of the vertical dimension, Finish

Inspection report

Date: 12/7/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7016 - 7014
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.00'	Length Surveyed: 678.00'

1:1274

Distance

Code

Observation

Grade

592.1	FM	Fracture Multiple from 8 o'clock to 3 o'clock, within 8 inch	S4	
607.8	FM	Fracture Multiple from 11 o'clock to 2 o'clock, within 8 inch	S4	
616.0	S09	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Start	
634.7	FL	Fracture Longitudinal at 2 o'clock, within 8 inch	S3	
654.6	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4	
659.9	FM	Fracture Multiple from 11 o'clock to 3 o'clock, within 8 inch	S4	
664.7	FM	Fracture Multiple from 8 o'clock to 2 o'clock, within 8 inch	S4	
674.1	F09	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Finish	S2
678.0	AMH	Manhole / 7014		

7014

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4F3A	2Q00	290.0	180.0	470.0	2.9	2.0	2.5

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7018 - 7016
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 677.40 '	Length Surveyed: 677.40 '

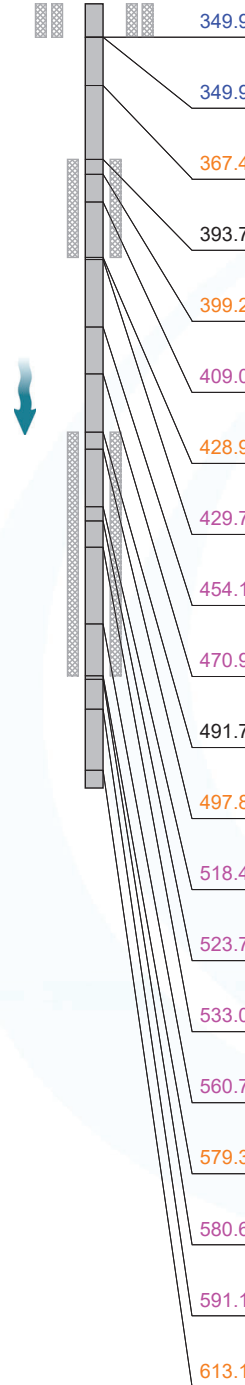
City: McFarland	Drainage Area:	Upstream MH: 7018
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7016
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2550	Distance	Code	Observation	Grade
7018	0.0	AMH	Manhole / 7018	
	0.0	MWL	Water Level, 20% of the vertical dimension	
	11.2	B	Broken from 7 o'clock to 5 o'clock, within 8 inch	S4
	21.4	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	42.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	53.4	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	74.9	FS	Fracture Spiral from 12 o'clock to 4 o'clock	S3
	111.0	FM	Fracture Multiple from 11 o'clock to 4 o'clock, within 8 inch	S4
	159.5	MWL	Water Level, 15% of the vertical dimension	
	205.1	MWL	Water Level, 20% of the vertical dimension	
	209.8	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch	M2
	219.7 S01	MWLS	Miscellaneous Water Level, Sag, 30% of the vertical dimension, Start	
	237.6	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	254.0 S02	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	254.0 S03	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	325.8 F01	MWLS	Miscellaneous Water Level, Sag, 30% of the vertical dimension, Finish	S2

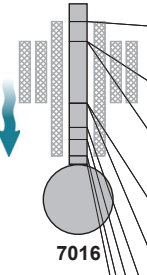
Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7018 - 7016
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 677.40 '	Length Surveyed: 677.40 '

1:2550	Distance	Code	Observation	Grade
	349.9	F02	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	349.9	F03	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2
	367.4	FS	Fracture Spiral from 2 o'clock to 5 o'clock, within 8 inch	S3
	393.7	S04	MWLS Miscellaneous Water Level, Sag, 40% of the vertical dimension, Start	
	399.2	FS	Fracture Spiral from 8 o'clock to 10 o'clock, within 8 inch	S3
	409.0	FM	Fracture Multiple from 8 o'clock to 2 o'clock, within 8 inch	S4
	428.9	F04	MWLS Miscellaneous Water Level, Sag, 40% of the vertical dimension, Finish	S3
	429.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	454.1	FM	Fracture Multiple from 8 o'clock to 2 o'clock, within 8 inch	S4
	470.9	FM	Fracture Multiple from 1 o'clock to 5 o'clock, within 8 inch	S4
	491.7	S05	MWLS Miscellaneous Water Level, Sag, 45% of the vertical dimension, Start	
	497.8	FS	Fracture Spiral from 10 o'clock to 2 o'clock, within 8 inch	S3
	518.4	FM	Fracture Multiple from 12 o'clock to 4 o'clock, within 8 inch	S4
	523.7	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	533.0	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	560.7	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	579.3	F05	MWLS Miscellaneous Water Level, Sag, 45% of the vertical dimension, Finish	S3
	580.6	FM	Fracture Multiple from 8 o'clock to 2 o'clock, within 8 inch	S4
	591.1	FM	Fracture Multiple from 8 o'clock to 3 o'clock, within 8 inch	S4
	613.1	FS	Fracture Spiral from 2 o'clock to 5 o'clock, within 8 inch	S3

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7018 - 7016
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 677.40 '	Length Surveyed: 677.40 '

1:2550	Distance	Code	Observation	Grade
	626.1 S06	MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Start	
	633.3 S07	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	633.3 S08	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	655.3 F07	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2
	655.3 F08	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	664.1	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	668.5	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	674.3 F06	MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Finish	S2
	677.4	AMH	Manhole / 7016	

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4B3E	2H00	224.0	94.0	318.0	2.8	2.0	2.5

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7020 - 7018
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.20 '	Length Surveyed: 678.20 '

City: McFarland	Drainage Area:	Upstream MH: 7020
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7018
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1525	Distance	Code	Observation	Grade
7020	0.0	AMH	Manhole / 7020	
	0.0	MWL	Water Level, 40% of the vertical dimension	
	36.6	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	43.5	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	58.1	FL	Fracture Longitudinal at 1 o'clock, within 8 inch	S3
	60.1	MWL	Water Level, 35% of the vertical dimension	
	62.1	FS	Fracture Spiral from 12 o'clock to 4 o'clock, within 8 inch	S3
	84.7	MWL	Water Level, 25% of the vertical dimension	
	89.2	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	106.3	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
	110.9	MWL	Water Level, 40% of the vertical dimension	
	126.5	FS	Fracture Spiral from 1 o'clock to 4 o'clock, within 8 inch	S3
	137.4	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	137.4	MWL	Water Level, 30% of the vertical dimension	
	147.5	FS	Fracture Spiral from 10 o'clock to 12 o'clock, within 8 inch	S3
	167.9	FM	Fracture Multiple from 11 o'clock to 2 o'clock, within 8 inch	S4

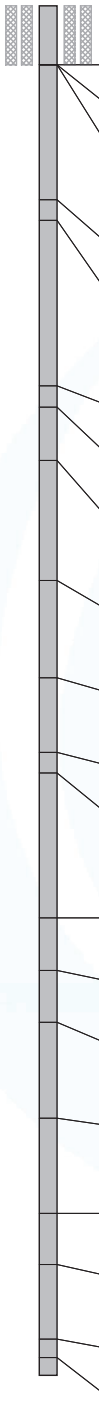
Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7020 - 7018
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.20 '	Length Surveyed: 678.20 '

1:1525	Distance	Code	Observation	Grade
	172.8	B	Broken from 10 o'clock to 4 o'clock, within 8 inch	S4
	182.9	S01	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	182.9	S02	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	194.8	FM	Fracture Multiple from 11 o'clock to 4 o'clock, within 8 inch	S4
	201.0	MWL	Water Level, 30% of the vertical dimension	
	204.5	FS	Fracture Spiral from 10 o'clock to 2 o'clock, within 8 inch	S3
	210.1	FM	Fracture Multiple from 9 o'clock to 3 o'clock	S4
	215.8	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	230.6	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	236.7	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
	247.1	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	273.1	FS	Fracture Spiral from 10 o'clock to 12 o'clock, within 8 inch	S3
	283.7	FL	Fracture Longitudinal at 12 o'clock, within 8 inch	S3
	290.0	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	305.1	FS	Fracture Spiral from 12 o'clock to 1 o'clock, within 8 inch	S3
	309.1	FS	Fracture Spiral from 1 o'clock to 4 o'clock, within 8 inch	S3
	319.8	FM	Fracture Multiple from 10 o'clock to 3 o'clock	S4
	367.5	FS	Fracture Spiral from 10 o'clock to 12 o'clock, within 8 inch	S3

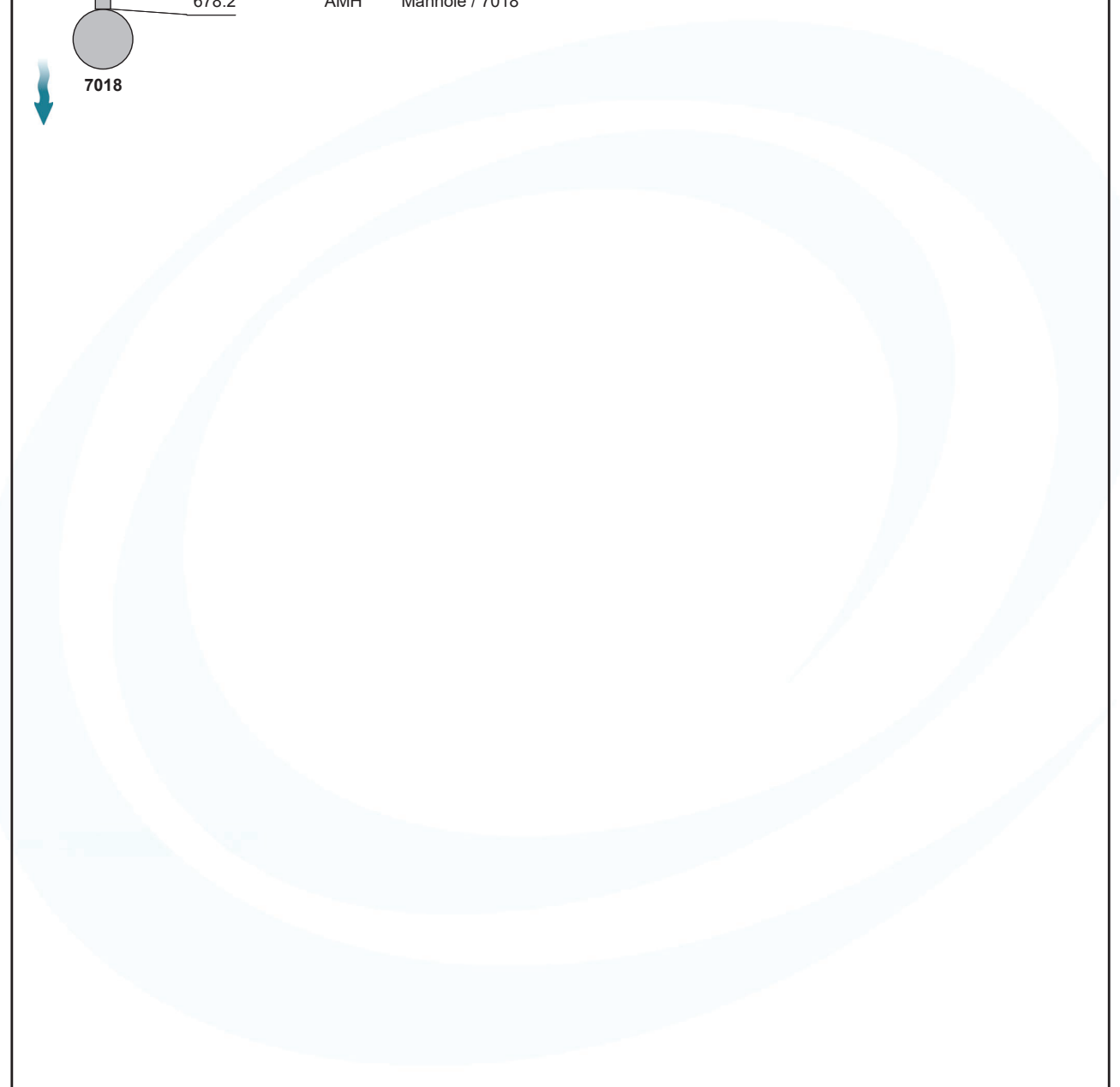
Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7020 - 7018
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.20'	Length Surveyed: 678.20'

1:1525	Distance	Code	Observation	Grade	
	392.9	FM	Fracture Multiple from 7 o'clock to 12 o'clock, within 8 inch	S4	
	392.9	F01	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	392.9	F02	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2
	421.9	MWL	Water Level, 20% of the vertical dimension		
	426.3	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4	
	461.8	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4	
	466.4	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4	
	477.8	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4	
	503.7	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4	
	524.6	FM	Fracture Multiple from 9 o'clock to 1 o'clock, within 8 inch	S4	
	540.5	FS	Fracture Spiral from 12 o'clock to 4 o'clock, within 8 inch	S3	
	545.0	FM	Fracture Multiple from 11 o'clock to 3 o'clock, within 8 inch	S4	
	576.1	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4	
	587.3	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4	
	598.5	FM	Fracture Multiple from 10 o'clock to 1 o'clock, within 8 inch	S4	
	619.1	FM	Fracture Multiple from 10 o'clock to 3 o'clock	S4	
	639.6	B	Broken from 1 o'clock to 4 o'clock, within 8 inch	S4	
	650.5	FM	Fracture Multiple from 11 o'clock to 2 o'clock, within 8 inch	S4	
	666.5	FM	Fracture Multiple from 8 o'clock to 1 o'clock, within 8 inch	S4	
	670.5	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4	

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7020 - 7018
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.20 '	Length Surveyed: 678.20 '

1:1525	Distance	Code	Observation	Grade			
 7018	678.2	AMH	Manhole / 7018				
							
QSR 4D3A	QMR 2O00	SPR 155.0	MPR 168.0	OPR 323.0	SPRI 3.7	MPRI 2.0	OPRI 2.6

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7022 - 7020
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 674.90 '	Length Surveyed: 674.90 '

City: McFarland	Drainage Area:	Upstream MH: 7022
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7020
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1857	Distance	Code	Observation	Grade
7022	0.0	AMH	Manhole / 7022	
	0.0	MWL	Water Level, 45% of the vertical dimension	
	4.0	FS	Fracture Spiral from 12 o'clock to 1 o'clock, within 8 inch	S3
	8.5	MWL	Water Level, 50% of the vertical dimension	
	13.3	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	24.3	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	28.8	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	38.9	FM	Fracture Multiple from 1 o'clock to 4 o'clock, within 8 inch	S4
	44.1	FM	Fracture Multiple from 9 o'clock to 12 o'clock, within 8 inch	S4
	50.6	FM	Fracture Multiple from 1 o'clock to 4 o'clock, within 8 inch	S4
	55.5	FS	Fracture Spiral from 12 o'clock to 4 o'clock, within 8 inch	S3
	71.2	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	76.4	FL	Fracture Longitudinal at 12 o'clock, within 8 inch	S3
	82.3	FS	Fracture Spiral from 11 o'clock to 2 o'clock, within 8 inch	S3
	90.8	MWL	Water Level, 40% of the vertical dimension	
	97.7	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7022 - 7020
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 674.90 '	Length Surveyed: 674.90 '

1:1857	Distance	Code	Observation	Grade
	102.0	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	119.1	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	127.5	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	133.3	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	138.6	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	143.8	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	148.5	MWL	Water Level, 35% of the vertical dimension	
	148.5	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	190.8	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	196.5	B	Broken from 10 o'clock to 4 o'clock, within 8 inch	S4
	205.3	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	205.3	MWL	Water Level, 40% of the vertical dimension	
	216.9	FS	Fracture Spiral from 1 o'clock to 5 o'clock, within 8 inch	S3
	238.1	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	248.8	FL	Fracture Longitudinal at 1 o'clock, within 8 inch	S3
	285.3	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	288.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	294.6	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	311.3	FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4
	311.3	MWL	Water Level, 30% of the vertical dimension	

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7022 - 7020
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 674.90 '	Length Surveyed: 674.90 '

1:1857	Distance	Code	Observation	Grade			
	321.9	FM	Fracture Multiple from 12 o'clock to 4 o'clock, within 8 inch	S4			
	331.9	FM	Fracture Multiple from 12 o'clock to 2 o'clock, within 8 inch	S4			
	358.1	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4			
	358.1	MWL	Water Level, 40% of the vertical dimension				
	363.5	S01 FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Start				
	479.7	MWL	Water Level, 45% of the vertical dimension				
	536.0	F01 FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Finish	S4			
	547.0	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4			
	556.4	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4			
	561.1	S02 FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Start				
	577.9	F02 FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Finish	S4			
	583.3	FS	Fracture Spiral from 8 o'clock to 4 o'clock, within 8 inch	S3			
	587.1	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4			
	601.8	MWL	Water Level, 40% of the vertical dimension				
	604.5	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4			
	614.0	FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4			
	618.9	FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4			
	639.7	FM	Fracture Multiple from 12 o'clock to 3 o'clock, within 8 inch	S4			
	671.4	FL	Fracture Longitudinal at 12 o'clock, within 8 inch	S3			
	674.9	AMH	Manhole / 7020				
7020							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4M38	0000	304.0	0.0	304.0	3.9	0.0	3.9

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7024 - 7022
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 677.20 '	Length Surveyed: 677.20 '

City: McFarland	Drainage Area:	Upstream MH: 7024
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7022
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2447	Distance	Code	Observation	Grade
7024	0.0	AMH	Manhole / 7024	
	0.0	MWL	Water Level, 25% of the vertical dimension	
	4.4	S01 MWLS	Miscellaneous Water Level, Sag, 40% of the vertical dimension, Start	
	6.6	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	17.0	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	27.5	FM	Fracture Multiple from 1 o'clock to 5 o'clock, within 8 inch	S4
	32.7	S02 FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Start / Wandering	
	54.1	F02 FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Finish / Wandering	S4
	70.8	FM	Fracture Multiple from 1 o'clock to 4 o'clock, within 8 inch	S4
	73.0	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	85.2	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	94.6	F01 MWLS	Miscellaneous Water Level, Sag, 40% of the vertical dimension, Finish	S3
	96.0	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	106.5	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	116.1	FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4
	122.4	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7024 - 7022
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 677.20'	Length Surveyed: 677.20'

1:2447	Distance	Code	Observation	Grade
	127.4 S03	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Start	
	202.9	MWL	Water Level, 20% of the vertical dimension	
	249.9 S04	MWLS	Miscellaneous Water Level, Sag, 45% of the vertical dimension, Start	
	316.5 F03	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Finish	S4
	320.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	337.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	343.1	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	380.0	FM	Fracture Multiple from 12 o'clock to 3 o'clock, within 8 inch	S4
	384.6	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	390.1	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	394.8 S05	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Start / Wandeing	
	405.5 F04	MWLS	Miscellaneous Water Level, Sag, 45% of the vertical dimension, Finish	S3
	432.6	B	Broken from 8 o'clock to 4 o'clock, within 8 inch	S4
	471.6 S06	MWLS	Miscellaneous Water Level, Sag, 45% of the vertical dimension, Start	
	536.2 F05	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch, Finish / Wandeing	S4
	557.5	FL	Fracture Longitudinal at 8 o'clock, within 8 inch	S3
	566.7	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	583.5	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	588.6	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	594.4	FM	Fracture Multiple from 8 o'clock to 11 o'clock, within 8 inch	S4

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7024 - 7022
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 677.20 '	Length Surveyed: 677.20 '



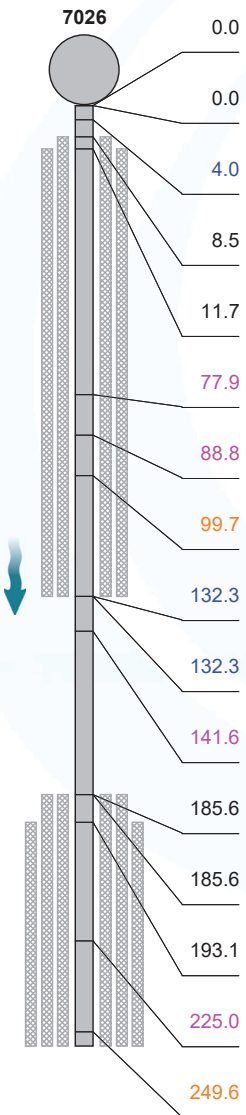
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4R3Q	0000	659.0	0.0	659.0	3.5	0.0	3.5

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7026 - 7024
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 680.00 '	Length Surveyed: 680.00 '

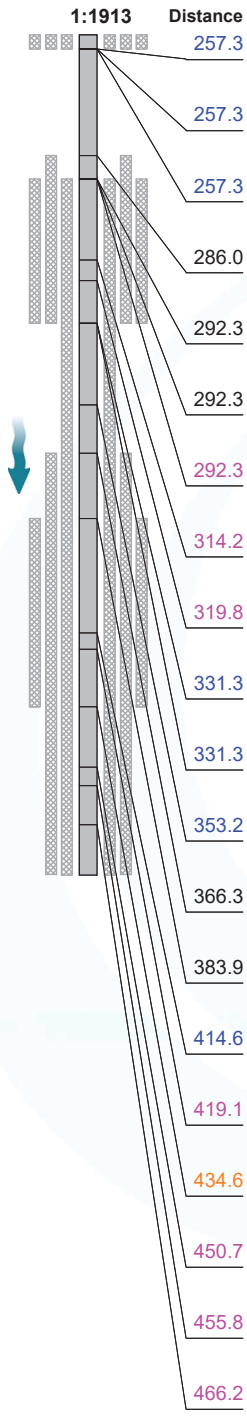
City: McFarland	Drainage Area:	Upstream MH: 7026
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7024
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1913	Distance	Code	Observation	Grade	
	0.0	AMH	Manhole / 7026		
	0.0	MWL	Water Level, 15% of the vertical dimension		
	4.0	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch	M2	
	8.5	S01	DAGS	Deposits Attached Grease, 10% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Start	
	11.7	S02	DAGS	Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start	
	77.9	B	Broken from 9 o'clock to 3 o'clock, within 8 inch	S4	
	88.8	B	Broken from 9 o'clock to 3 o'clock, within 8 inch	S4	
	99.7	FS	Fracture Spiral from 12 o'clock to 5 o'clock, within 8 inch	S3	
	132.3	F01	DAGS	Deposits Attached Grease, 10% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Finish	M2
	132.3	F02	DAGS	Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish	M2
	141.6	FM	Fracture Multiple from 11 o'clock to 5 o'clock, within 8 inch	S4	
	185.6	S03	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	185.6	S04	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	193.1	S05	MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Start	
	225.0	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4	
249.6	DAR	Deposits Attached Ragging, 15% of cross sectional area from 4 o'clock to 8 o'clock	M3		

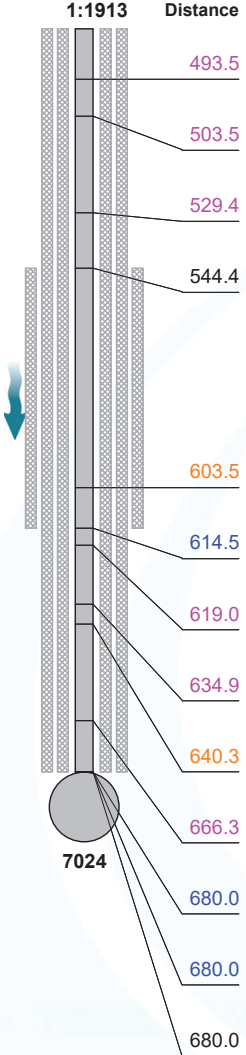
Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7026 - 7024
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 680.00'	Length Surveyed: 680.00'

1:1913	Distance		Code	Observation	Grade
	257.3	F03	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2
	257.3	F04	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	257.3	F05	MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Finish	S2
	286.0	S06	MWLS	Miscellaneous Water Level, Sag, 30% of the vertical dimension, Start	
	292.3	S07	DAGS	Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	292.3	S08	DAGS	Deposits Attached Grease, 10% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	292.3		FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	314.2		FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	319.8		FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	331.3	F06	MWLS	Miscellaneous Water Level, Sag, 30% of the vertical dimension, Finish	S2
	331.3	F07	DAGS	Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	353.2		DAGS	Deposits Attached Grease, 5% of cross sectional area from 4 o'clock to 5 o'clock, within 8 inch	M2
	366.3	S09	DAGS	Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start	
	383.9	S10	MWLS	Miscellaneous Water Level, Sag, 35% of the vertical dimension, Start	
	414.6		FC	Fracture Circumferential from 9 o'clock to 1 o'clock, within 8 inch	S2
	419.1		FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	434.6	F10	MWLS	Miscellaneous Water Level, Sag, 35% of the vertical dimension, Finish	S3
	450.7		FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	455.8		FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	466.2		FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7026 - 7024
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 680.00 '	Length Surveyed: 680.00 '

1:1913	Distance	Code	Observation	Grade
	493.5	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	503.5	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	529.4	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	544.4	S11 MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Start	
	603.5	FL	Fracture Longitudinal at 12 o'clock, within 8 inch	S3
	614.5	F11 MWLS	Miscellaneous Water Level, Sag, 25% of the vertical dimension, Finish	S2
	619.0	FM	Fracture Multiple from 1 o'clock to 4 o'clock, within 8 inch	S4
	634.9	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4
	640.3	FS	Fracture Spiral from 12 o'clock to 2 o'clock, within 8 inch	S3
	666.3	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	7024	680.0	F08 DAGS	Deposits Attached Grease, 10% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2
	680.0	F09 DAGS	Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish	M2
	680.0	AMH	Manhole / 7024	

QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4B3A	312Z	181.0	459.0	640.0	2.7	2.0	2.2

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7028 - 7026
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.30 '	Length Surveyed: 678.30 '

City: McFarland	Drainage Area:	Upstream MH: 7028
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7026
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2370	Distance	Code	Observation	Grade
7028	0.0	AMH	Manhole / 7028	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	21.8	S01	DAGS Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start	
	21.8	S02	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	50.6	F01	DAGS Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish	M2
	50.6	F02	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2
	59.6	S03	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	59.6	S04	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	123.6	F03	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2
	123.6	F04	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	133.9	S05	DAGS Deposits Attached Grease, 10% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	133.9	S06	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	148.7	FM	Fracture Multiple from 12 o'clock to 4 o'clock, within 8 inch	S4
	159.7	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
	185.8	F06	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	201.1	S07	DAGS Deposits Attached Grease, 15% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start	

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7028 - 7026
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.30 '	Length Surveyed: 678.30 '

1:2370	Distance	Code	Observation	Grade			
	240.7	MWL	Water Level, 15% of the vertical dimension				
	278.7	DAR	Deposits Attached Ragging, 5% of cross sectional area from 4 o'clock to 5 o'clock, within 8 inch	M2			
	285.4	FM	Fracture Multiple from 7 o'clock to 11 o'clock, within 8 inch	S4			
	285.4	FM	Fracture Multiple from 3 o'clock to 5 o'clock, within 8 inch	S4			
	300.9	FS	Fracture Spiral from 10 o'clock to 11 o'clock, within 8 inch	S3			
	362.7	MWL	Water Level, 20% of the vertical dimension				
	457.5	FM	Fracture Multiple from 9 o'clock to 2 o'clock, within 8 inch	S4			
	457.5 F05	DAGS	Deposits Attached Grease, 10% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2			
	457.5 F07	DAGS	Deposits Attached Grease, 15% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish	M3			
	468.2	CM	Crack Multiple from 11 o'clock to 1 o'clock, within 8 inch	S3			
	481.1 S08	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start				
	481.1 S09	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start				
	484.4	FM	Fracture Multiple from 2 o'clock to 5 o'clock, within 8 inch	S4			
	561.0	OBZ	Obstruction Other, 10% of cross sectional area from 5 o'clock to 7 o'clock / Unknown	M2			
	600.1	MWL	Water Level, 30% of the vertical dimension				
	648.3	OBZ	Obstruction Other, 25% of cross sectional area from 4 o'clock to 8 o'clock, within 8 inch / Unknown	M4			
	678.3 F08	DAGS	Deposits Attached Grease, 10% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2			
	678.3 F09	DAGS	Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2			
	678.3	AMH	Manhole / 7026				
7026							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4533	4131	29.0	543.0	572.0	3.6	2.2	2.3

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7030 - 7028
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 676.40 '	Length Surveyed: 676.40 '

City: McFarland	Drainage Area:	Upstream MH: 7030
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7028
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2861	Distance	Code	Observation	Grade
7030	0.0	AMH	Manhole / 7030	
	0.0	MWL	Water Level, 15% of the vertical dimension	
	8.8	B	Broken from 8 o'clock to 4 o'clock, within 8 inch	S4
	21.1	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4
	29.5	FM	Fracture Multiple from 8 o'clock to 10 o'clock, within 8 inch	S4
	34.0	FS	Fracture Spiral from 1 o'clock to 4 o'clock, within 8 inch	S3
	42.8	FM	Fracture Multiple from 9 o'clock to 2 o'clock, within 8 inch	S4
	46.8	FM	Fracture Multiple from 10 o'clock to 2 o'clock, within 8 inch	S4
	50.2	VC	Vermin Cockroach, within 8 inch	M1
	50.8	FS	Fracture Spiral from 9 o'clock to 11 o'clock, within 8 inch	S3
	54.6	B	Broken from 11 o'clock to 5 o'clock, within 8 inch	S4
	58.8	FM	Fracture Multiple from 7 o'clock to 10 o'clock, within 8 inch	S4
	70.6	FM	Fracture Multiple from 10 o'clock to 4 o'clock, within 8 inch	S4
	83.9	FM	Fracture Multiple from 9 o'clock to 4 o'clock, within 8 inch	S4
	87.6	FM	Fracture Multiple from 9 o'clock to 12 o'clock, within 8 inch	S4
	91.9	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7030 - 7028
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 676.40'	Length Surveyed: 676.40'

1:2861	Distance	Code	Observation	Grade			
	156.8	FM	Fracture Multiple from 10 o'clock to 1 o'clock, within 8 inch	S4			
	174.2	S01	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Start				
	183.4	FM	Fracture Multiple from 9 o'clock to 3 o'clock, within 8 inch	S4			
	183.4	F01	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Finish	M2			
	215.2	S02	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Start				
	225.5	F02	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Finish	M2			
	236.3	FM	Fracture Multiple from 8 o'clock to 1 o'clock, within 8 inch	S4			
	266.7	DAGS	Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 8 o'clock, within 8 inch	M2			
	290.7	S03	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Start / Wandering				
	290.7	S04	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Start / Wandering				
	486.7	FM	Fracture Multiple from 1 o'clock to 4 o'clock, within 8 inch	S4			
	638.6	F03	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 9 o'clock, within 8 inch, Finish / Wandering	M2			
	638.6	F04	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 5 o'clock, within 8 inch, Finish / Wandering	M2			
	647.9	S05	DAGS Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start				
	647.9	S06	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start				
	658.9	F05	DAGS Deposits Attached Grease, 10% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2			
	658.9	F06	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2			
	676.4	AMH	Manhole / 7028				
7028							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4A33	2711	65.0	299.0	364.0	3.8	2.0	2.2

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7032 - 7030
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 671.40 '	Length Surveyed: 671.40 '

City: McFarland	Drainage Area:	Upstream MH: 7032
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7030
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2335	Distance	Code	Observation	Grade
7032	0.0	AMH	Manhole / 7032	
	0.0	MWL	Water Level, 20% of the vertical dimension	
	14.2	S01	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	14.2	S02	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	37.6	MWL	Water Level, 25% of the vertical dimension	
	57.3	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	78.1	MWL	Water Level, 20% of the vertical dimension	
	171.6	B	Broken from 8 o'clock to 4 o'clock, within 8 inch	S4
	219.1	MWL	Water Level, 25% of the vertical dimension	
	236.9	MWL	Water Level, 40% of the vertical dimension	
	242.7	MWL	Water Level, 35% of the vertical dimension	
	291.4	F01	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	291.4	F02	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2
	291.4	MWL	Water Level, 20% of the vertical dimension	
	300.1	B	Broken from 8 o'clock to 4 o'clock	S4
	304.7	FM	Fracture Multiple from 10 o'clock to 1 o'clock, within 8 inch	S4

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7032 - 7030
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 671.40'	Length Surveyed: 671.40'

1:2335	Distance	Code	Observation	Grade
	314.0	FS	Fracture Spiral from 9 o'clock to 12 o'clock, within 8 inch	S3
	317.5	FS	Fracture Spiral from 10 o'clock to 12 o'clock, within 8 inch	S3
	318.7	MWL	Water Level, 20% of the vertical dimension	
	326.7	FS	Fracture Spiral from 12 o'clock to 1 o'clock, within 8 inch	S3
	334.0	B	Broken from 12 o'clock to 2 o'clock, within 8 inch	S4
	338.3	FM	Fracture Multiple from 10 o'clock to 11 o'clock, within 8 inch	S4
	338.3	FL	Fracture Longitudinal at 4 o'clock, within 8 inch	S3
	341.0	B	Broken from 1 o'clock to 4 o'clock, within 8 inch	S4
	346.4	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	346.4	MWL	Water Level, 15% of the vertical dimension	
	351.0	FL	Fracture Longitudinal at 12 o'clock, within 8 inch, length: 2inch	S3
	356.4	MWL	Water Level, 10% of the vertical dimension	
	358.8	FS	Fracture Spiral from 2 o'clock to 4 o'clock, within 8 inch	S3
	363.6	FL	Fracture Longitudinal at 10 o'clock, within 8 inch	S3
	375.6	FL	Fracture Longitudinal at 8 o'clock, within 8 inch	S3
	375.9	VC	Vermin Cockroach, within 8 inch	M1
	375.9	CL	Crack Longitudinal at 1 o'clock, within 8 inch	S2
	380.2	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	417.9	FM	Fracture Multiple from 12 o'clock to 3 o'clock, within 8 inch	S4
	430.1	FM	Fracture Multiple from 10 o'clock to 3 o'clock, within 8 inch	S4

Inspection report

Date: 12/6/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7032 - 7030
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 671.40 '	Length Surveyed: 671.40 '

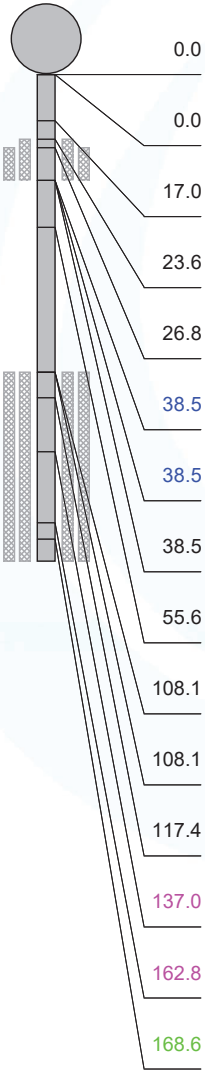
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4C3A	2U11	148.0	229.0	377.0	3.3	2.0	2.4

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7034 - 7032
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 674.00 '	Length Surveyed: 674.00 '

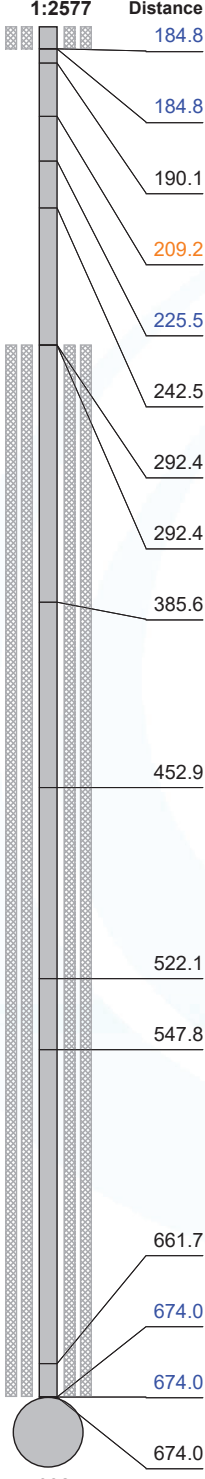
City: McFarland	Drainage Area:	Upstream MH: 7034
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7032
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2577	Distance	Code	Observation	Grade
	0.0	AMH	Manhole / 7034	
	0.0	MWL	Water Level, 15% of the vertical dimension	
	17.0	MWL	Water Level, 20% of the vertical dimension	
	23.6	S01	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 8 o'clock, within 8 inch, Start	
	26.8	S02	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	38.5	F01	DAGS Deposits Attached Grease, 5% of cross sectional area from 7 o'clock to 8 o'clock, within 8 inch, Finish	M2
	38.5	F02	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2
	38.5	MWL	Water Level, 10% of the vertical dimension	
	55.6	MWL	Water Level, 15% of the vertical dimension	
	108.1	S03	DAGS Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start	
	108.1	S04	DAGS Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start	
	117.4	MWL	Water Level, 20% of the vertical dimension	
	137.0	B	Broken from 12 o'clock to 4 o'clock, within 8 inch	S4
	162.8	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	168.6	CC	Crack Circumferential from 7 o'clock to 9 o'clock, within 8 inch	S1

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7034 - 7032
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 674.00'	Length Surveyed: 674.00'

1:2577	Distance		Code	Observation	Grade		
	184.8	F03	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2		
	184.8	F04	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2		
	190.1		MWL	Water Level, 15% of the vertical dimension			
	209.2		FL	Fracture Longitudinal at 2 o'clock, within 8 inch	S3		
	225.5		DAGS	Deposits Attached Grease, 5% of cross sectional area at 4 o'clock, within 8 inch	M2		
	242.5		MWL	Water Level, 20% of the vertical dimension			
	292.4	S05	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start			
	292.4	S06	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start			
	385.6		MWL	Water Level, 30% of the vertical dimension			
	452.9		MWL	Water Level, 25% of the vertical dimension			
	522.1		MWL	Water Level, 30% of the vertical dimension			
	547.8		MWL	Water Level, 25% of the vertical dimension			
	661.7		MWL	Water Level, 20% of the vertical dimension			
	674.0	F05	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish	M2		
	674.0	F06	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish	M2		
	674.0		AMH	Manhole / 7032			
7032							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4231	2700	12.0	376.0	388.0	3.0	2.0	2.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7035 - 7034
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 675.20 '	Length Surveyed: 675.20 '

City: McFarland	Drainage Area:	Upstream MH: 7035
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7034
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:4511	Distance	Code	Observation	Grade
7035	0.0	AMH	Manhole / 7035	
	0.0	MWL	Water Level, 35% of the vertical dimension	
	6.9	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	18.4	MWL	Water Level, 40% of the vertical dimension	
	63.4	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch	M2
	104.0	MWL	Water Level, 35% of the vertical dimension	
	119.5	MGO	Miscellaneous General Observation / Buried UDMH	
	133.5	MWL	Water Level, 40% of the vertical dimension	
	184.4	MWL	Water Level, 45% of the vertical dimension	
	261.7	MWL	Water Level, 40% of the vertical dimension	
	323.4	DAGS	Deposits Attached Grease, 5% of cross sectional area at 9 o'clock, within 8 inch	M2
	456.3	MWL	Water Level, 40% of the vertical dimension	
	509.3	S01	DAGS	Deposits Attached Grease, 5% of cross sectional area at 9 o'clock, within 8 inch, Start
	509.3	S02	DAGS	Deposits Attached Grease, 5% of cross sectional area at 3 o'clock, Start
	520.1	F01	DAGS	Deposits Attached Grease, 5% of cross sectional area at 9 o'clock, within 8 inch, Finish
	520.1	F02	DAGS	Deposits Attached Grease, 5% of cross sectional area at 3 o'clock, Finish

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7035 - 7034
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 675.20'	Length Surveyed: 675.20'

1:4511

Distance

Code

Observation

Grade

675.2

7034

AMH

Manhole / 7034

QSR

4100

QMR

2600

SPR

4.0

MPR

12.0

OPR

16.0

SPRI

4.0

MPRI

2.0

OPRI

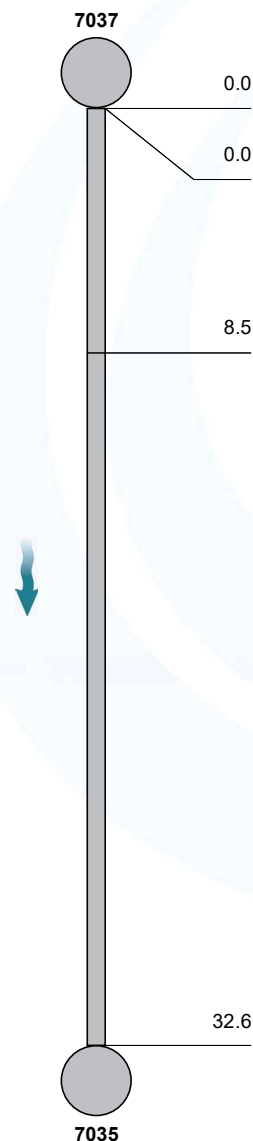
2.3

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7037 - 7035
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 32.60 '	Length Surveyed: 32.60 '

City: McFarland	Drainage Area:	Upstream MH: 7037
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7035
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

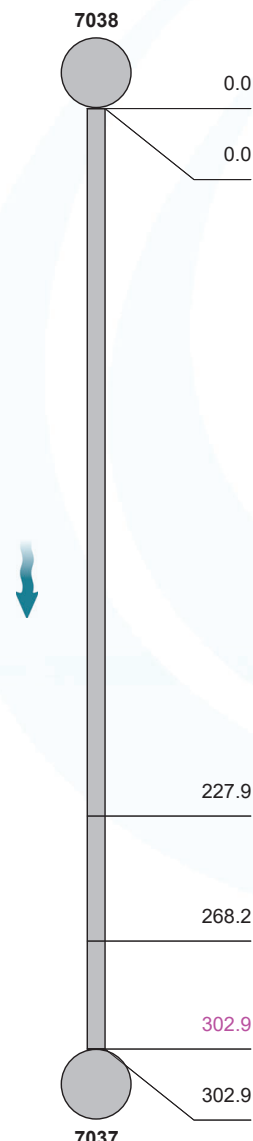
1:247	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7037				
	0.0	MWL	Water Level, 30% of the vertical dimension				
	8.5	MWL	Water Level, 40% of the vertical dimension				
	32.6	AMH	Manhole / 7035				
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	0000	0.0	0.0	0.0	0.0	0.0	0.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7038 - 7037
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 302.90 '	Length Surveyed: 302.90 '

City: McFarland	Drainage Area:	Upstream MH: 7038
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7037
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

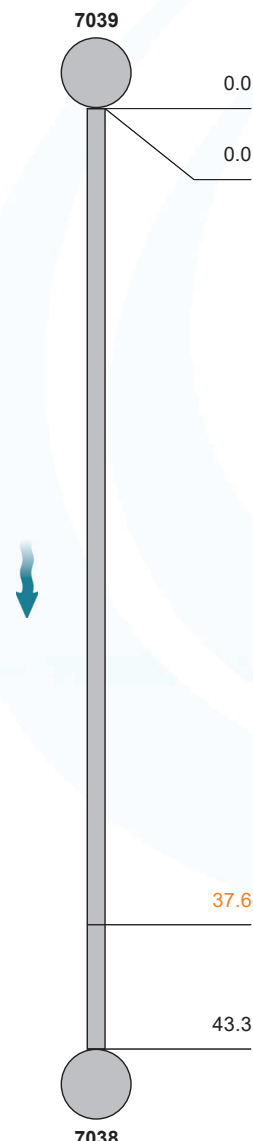
1:2287	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7038				
	0.0	MWL	Water Level, 10% of the vertical dimension				
	227.9	MWL	Water Level, 20% of the vertical dimension				
	268.2	MWL	Water Level, 40% of the vertical dimension				
	302.9	OBZ	Obstruction Other, 25% of cross sectional area from 3 o'clock to 9 o'clock / Object blocking flow	M4			
	302.9	AMH	Manhole / 7037				
QSR 0000	QMR 4100	SPR 0.0	MPR 4.0	OPR 4.0	SPRI 0.0	MPRI 4.0	OPRI 4.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7039 - 7038
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 43.30 '	Length Surveyed: 43.30 '

City: McFarland	Drainage Area:	Upstream MH: 7039
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7038
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

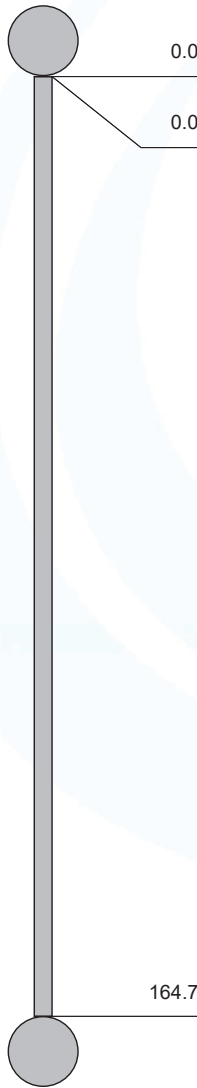
1:327	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7039				
	0.0	MWL	Water Level, 10% of the vertical dimension				
	37.6	FS	Fracture Spiral from 4 o'clock to 5 o'clock, within 8 inch	S3			
	43.3	AMH	Manhole / 7038				
7039							
7038							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
3100	0000	3.0	0.0	3.0	3.0	0.0	3.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7040 - 7039
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 164.70 '	Length Surveyed: 164.70 '

City: McFarland	Drainage Area:	Upstream MH: 7040
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7039
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

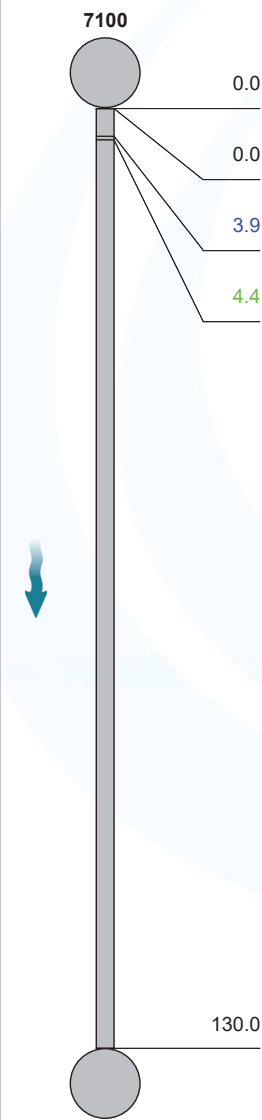
1:1244		Distance	Code	Observation	Grade		
	0.0	AMH	Manhole / 7040				
	0.0	MWL	Water Level, 10% of the vertical dimension				
	164.7	AMH	Manhole / 7039				
7040							
7039							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	0000	0.0	0.0	0.0	0.0	0.0	0.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7100 - 7040
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 130.00 '	Length Surveyed: 130.00 '

City: McFarland	Drainage Area:	Upstream MH: 7100
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7040
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

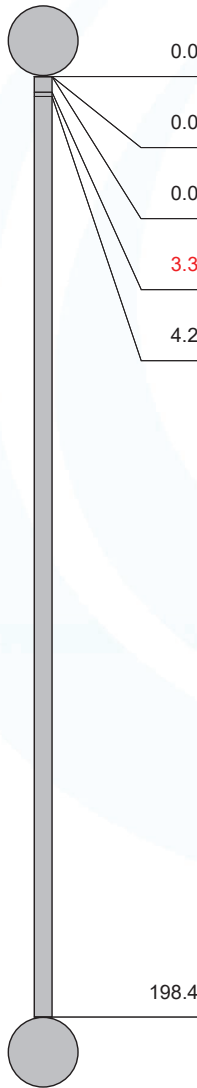
1:982	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7100				
	0.0	MWL	Water Level, 10% of the vertical dimension				
	3.9	SSS	Surface Damage Spalling from 9 o'clock to 11 o'clock	S2			
	4.4	VC	Vermin Cockroach, within 8 inch	M1			
	130.0	AMH	Manhole / 7040				
7100							
7040							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
2100	1100	2.0	1.0	3.0	2.0	1.0	1.5

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7041 - 7100
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 198.40 '	Length Surveyed: 198.40 '

City: McFarland	Drainage Area:	Upstream MH: 7041
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7100
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

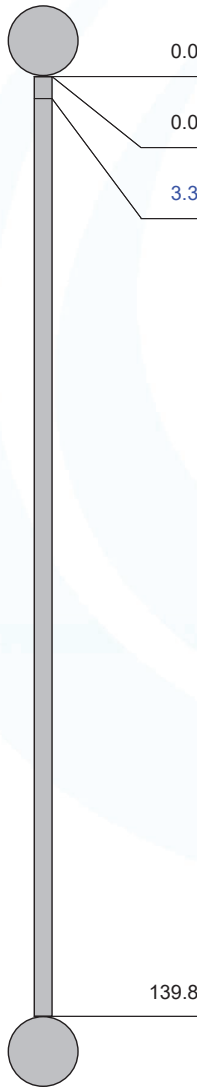
1:1498	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7041				
	0.0	MWL	Water Level, 10% of the vertical dimension				
	0.0	RPR	Point Repair Replacement, within 8 inch / PVC				
	3.3	BSV	Broken Soil Visible from 8 o'clock to 11 o'clock, within 8 inch	S5			
	4.2	MGP	Miscellaneous General Photograph from 7 o'clock to 11 o'clock / BSV				
	198.4	AMH	Manhole / 7100				
7100							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
5100	0000	5.0	0.0	5.0	5.0	0.0	5.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7042 - 7041
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 139.80 '	Length Surveyed: 139.80 '

City: McFarland	Drainage Area:	Upstream MH: 7042
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7041
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1056	Distance	Code	Observation	Grade
	0.0	AMH	Manhole / 7042	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	3.3	SSS	Surface Damage Spalling from 9 o'clock to 1 o'clock	S2
	139.8	AMH	Manhole / 7041	
	7041			

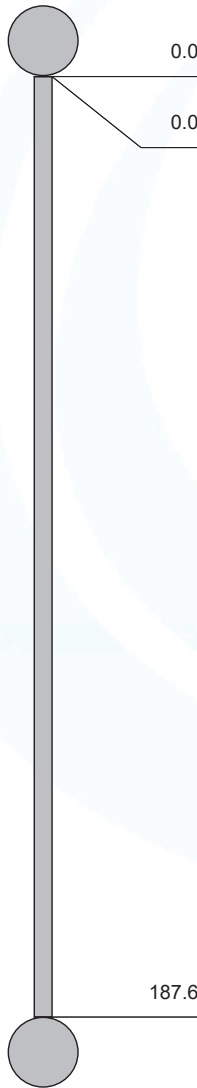
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
2100	0000	2.0	0.0	2.0	2.0	0.0	2.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7043 - 7042
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 187.60 '	Length Surveyed: 187.60 '

City: McFarland	Drainage Area:	Upstream MH: 7043
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7042
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

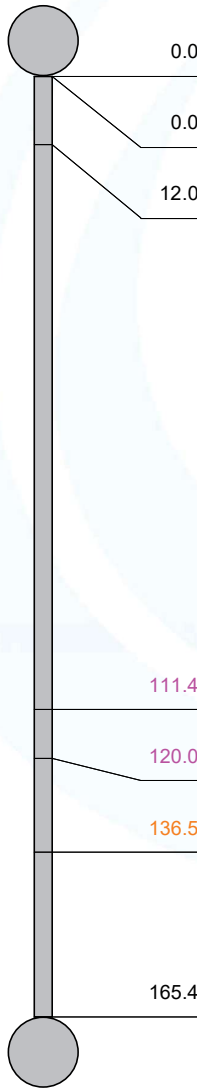
1:1416	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7043				
	0.0	MWL	Water Level, 10% of the vertical dimension				
	187.6	AMH	Manhole / 7042				
QSR 0000	QMR 0000	SPR 0.0	MPR 0.0	OPR 0.0	SPRI 0.0	MPRI 0.0	OPRI 0.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7045 - 7043
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 165.40 '	Length Surveyed: 165.40 '

City: McFarland	Drainage Area:	Upstream MH: 7045
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7043
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1249	Distance	Code	Observation	Grade
	0.0	AMH	Manhole / 7045	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	12.0	MGP	Miscellaneous General Photograph at 12 o'clock / MH 7044	
	111.4	FM	Fracture Multiple from 1 o'clock to 5 o'clock, within 8 inch	S4
	120.0	FM	Fracture Multiple from 7 o'clock to 5 o'clock, within 8 inch	S4
	136.5	FL	Fracture Longitudinal at 4 o'clock, within 8 inch	S3
	165.4	AMH	Manhole / 7043	
7045				
7043				

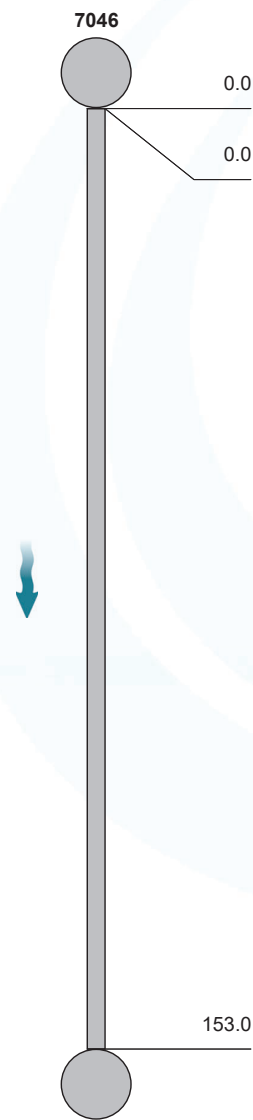
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4231	0000	11.0	0.0	11.0	3.7	0.0	3.7

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7046 - 7045
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 153.00 '	Length Surveyed: 153.00 '

City: McFarland	Drainage Area:	Upstream MH: 7046
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7045
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

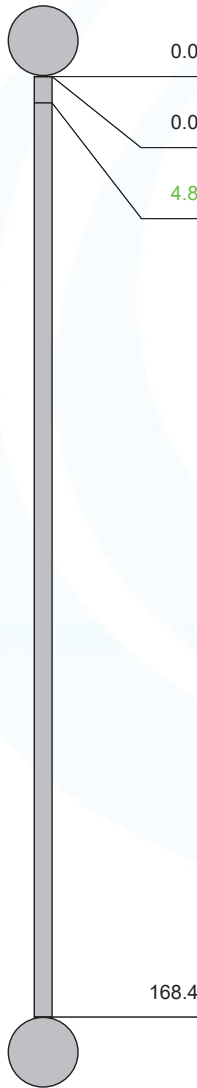
1:1155	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7046				
	0.0	MWL	Water Level, 10% of the vertical dimension				
	153.0	AMH	Manhole / 7045				
7046							
7045							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	0000	0.0	0.0	0.0	0.0	0.0	0.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7047 - 7046
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 168.40 '	Length Surveyed: 168.40 '

City: McFarland	Drainage Area:	Upstream MH: 7048
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7046
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1271	Distance	Code	Observation	Grade
	0.0	AMH	Manhole / 7048	
	0.0	MWL	Water Level, 10% of the vertical dimension	
	4.8	VC	Vermin Cockroach, within 8 inch	M1
	168.4	AMH	Manhole / 7046	
	7046			

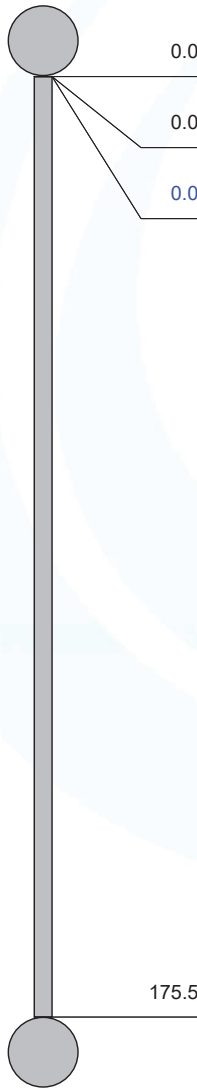
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	1100	0.0	1.0	1.0	0.0	1.0	1.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7048 - 7047
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 175.50 '	Length Surveyed: 175.50 '

City: McFarland	Drainage Area:	Upstream MH: 7048
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7047
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

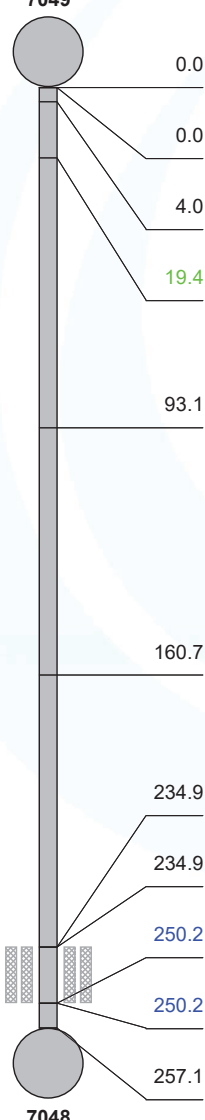
1:1325	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7048				
	0.0	MWL	Water Level, 15% of the vertical dimension				
	0.0	DAR	Deposits Attached Ragging, 10% of cross sectional area from 6 o'clock to 8 o'clock, within 8 inch	M2			
	175.5	AMH	Manhole / 7047				
QSR 0000	QMR 2100	SPR 0.0	MPR 2.0	OPR 2.0	SPRI 0.0	MPRI 2.0	OPRI 2.0

Inspection report

Date: 12/5/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7049 -7048
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 257.10 '	Length Surveyed: 257.10 '

City: McFarland	Drainage Area:	Upstream MH: 7049
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7048
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 18 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method: None	Owner:	

Additional Info:

1:1941	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7049				
	0.0	MWL	Water Level, 15% of the vertical dimension				
	4.0	MWL	Water Level, 20% of the vertical dimension				
	19.4	VC	Vermin Cockroach, within 8 inch	M1			
	93.1	MWL	Water Level, 30% of the vertical dimension				
	160.7	MWL	Water Level, 25% of the vertical dimension				
	234.9 S01	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Start / wandering				
	234.9 S02	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Start / wandering				
	250.2 F01	DAGS	Deposits Attached Grease, 5% of cross sectional area from 3 o'clock to 4 o'clock, within 8 inch, Finish / wandering	M2			
	250.2 F02	DAGS	Deposits Attached Grease, 5% of cross sectional area from 8 o'clock to 9 o'clock, within 8 inch, Finish / wandering	M2			
	257.1	AMH	Manhole / 7048				
QSR 0000	QMR 2611	SPR 0.0	MPR 13.0	OPR 13.0	SPRI 0.0	MPRI 1.9	OPRI 1.9

Inspection report

Date: 12/8/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7002 - Headworks
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 290.30 '	Length Surveyed: 290.30 '

City: McFarland	Drainage Area:	Upstream MH: 7002
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: Headworks
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 24 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Polyvinyl Chloride	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2191 Distance Code Observation Grade

7002

0.0 AMH Manhole / 7002

0.0 MWL Water Level, 10% of the vertical dimension

19.4 S01 MWLS Miscellaneous Water Level, Sag, 20% of the vertical dimension, Start

34.7 F01 MWLS Miscellaneous Water Level, Sag, 20% of the vertical dimension, Finish S2

290.3 AMH Manhole / Headworks

Headworks

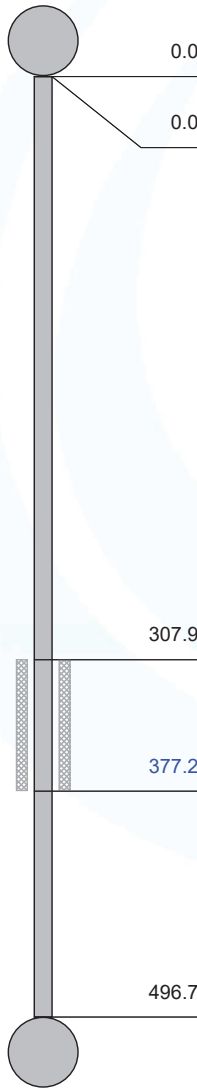
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
2300	0000	6.0	0.0	6.0	2.0	0.0	2.0

Inspection report

Date: 12/8/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7004 - 7002
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 496.70 '	Length Surveyed: 496.70 '

City: McFarland	Drainage Area:	Upstream MH: 7004
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7002
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 24 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Polyvinyl Chloride	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:3749	Distance	Code	Observation	Grade	
	0.0	AMH	Manhole / 7004		
	0.0	MWL	Water Level, 10% of the vertical dimension		
	307.9	S01	MWLS	Miscellaneous Water Level, Sag, 30% of the vertical dimension, Start	
	377.2	F01	MWLS	Miscellaneous Water Level, Sag, 30% of the vertical dimension, Finish	S2
	496.7	AMH	Manhole / 7002		
	7002				

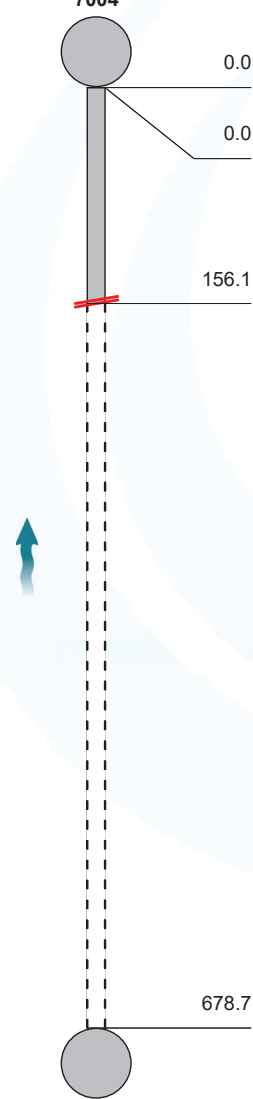
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
2A00	0000	28.0	0.0	28.0	2.0	0.0	2.0

Inspection report

Date: 12/8/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7005 - 7004
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Upstream	Pipe Joint Length:	Total Length: 678.70 '	Length Surveyed: 156.10 '

City: McFarland	Drainage Area:	Upstream MH: 7005
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7004
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 24 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Polyvinyl Chloride	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

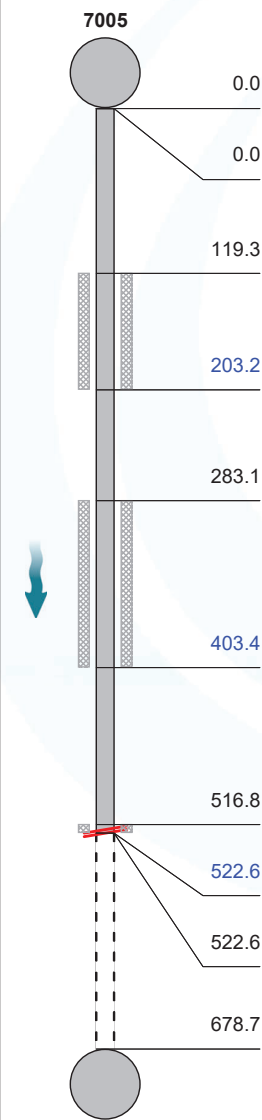
1:5123	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7004				
	0.0	MWL	Water Level, 15% of the vertical dimension				
	156.1	MSA	Miscellaneous Survey Abandoned / Reached overlap				
	678.7		End of pipe				
7005							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	0000	0.0	0.0	0.0	0.0	0.0	0.0

Inspection report

Date: 12/8/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7005 - 7004
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.70 '	Length Surveyed: 522.60 '

City: McFarland	Drainage Area:	Upstream MH: 7005
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7004
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 24 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Polyvinyl Chloride	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

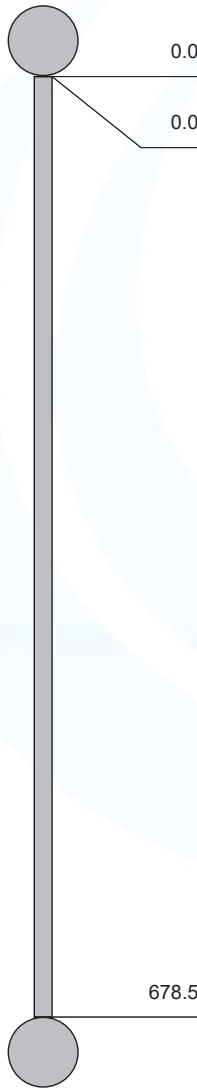
1:5123	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7005				
	0.0	MWL	Water Level, 10% of the vertical dimension				
	119.3	S01	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Start			
	203.2	F01	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Finish	S2		
	283.1	S02	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Start			
	403.4	F02	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Finish	S2		
	516.8	S03	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Start			
	522.6	F03	MWLS	Miscellaneous Water Level, Sag, 20% of the vertical dimension, Finish	S2		
	522.6	MSA	Miscellaneous Survey Abandoned / Camera slipping				
	678.7		End of pipe				
7005							
7004							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
2G00	0000	84.0	0.0	84.0	2.0	0.0	2.0

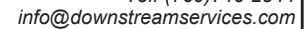
Inspection report

Date: 12/8/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7007 - 7005
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 678.50 '	Length Surveyed: 678.50 '

City: McFarland	Drainage Area:	Upstream MH: 7007
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7005
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 24 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Polyvinyl Chloride	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:5121	Distance	Code	Observation	Grade			
7007  7005	0.0	AMH	Manhole / 7007				
	0.0	MWL	Water Level, 10% of the vertical dimension				
	678.5	AMH	Manhole / 7005				
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	0000	0.0	0.0	0.0	0.0	0.0	0.0



Inspection report

Date: 12/4/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7050 - 7049
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 342.00 '	Length Surveyed: 342.00 '

City: McFarland	Drainage Area:	Upstream MH: 7050
Street: Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7049
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 12 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:1622	Distance	Code	Observation	Grade
7050	0.0	AMH	Manhole / 7050	
	0.0	MWL	Water Level, 20% of the vertical dimension	
	16.1	MWL	Water Level, 10% of the vertical dimension	
	16.4	VC	Vermin Cockroach, within 8 inch	M1
	24.4	MWL	Water Level, 15% of the vertical dimension	
	34.1	MWL	Water Level, 20% of the vertical dimension	
	71.5	CS	Crack Spiral from 7 o'clock to 8 o'clock, within 8 inch	S2
	84.1	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	117.1	FM	Fracture Multiple from 10 o'clock to 1 o'clock, within 8 inch	S4
	122.7	TFC	Tap Factory Made Capped at 10 o'clock, dia/height: 6inch, within 8 inch	
	153.4	CS	Crack Spiral from 7 o'clock to 8 o'clock, within 8 inch	S2
	154.0	MWL	Water Level, 10% of the vertical dimension	
	161.4	FM	Fracture Multiple from 10 o'clock to 12 o'clock, within 8 inch	S4
	186.0	FM	Fracture Multiple from 11 o'clock to 4 o'clock, within 8 inch	S4
	190.2	FM	Fracture Multiple from 8 o'clock to 4 o'clock, within 8 inch	S4
	198.4	FM	Fracture Multiple from 7 o'clock to 4 o'clock, within 8 inch	S4

Inspection report

Date: 12/4/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7050 - 7049
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 342.00 '	Length Surveyed: 342.00 '

1:1622

Distance

Code

Observation

Grade

231.4

FM

Fracture Multiple from 12 o'clock to 5 o'clock, within 8 inch

S4

257.3

TFC

Tap Factory Made Capped at 10 o'clock, dia/height: 6inch, within 8 inch

275.5

B

Broken from 8 o'clock to 4 o'clock, within 8 inch

S4

342.0

AMH

Manhole / 7049

7049

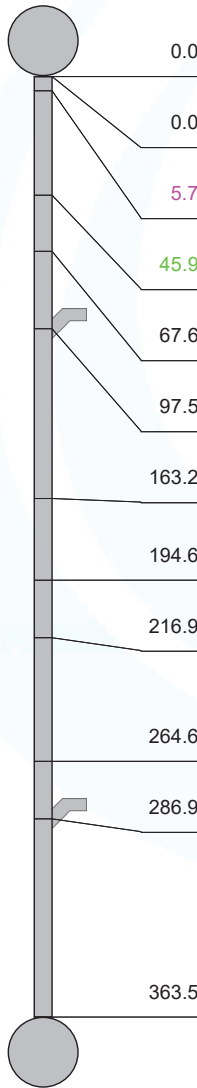
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4822	1100	36.0	1.0	37.0	3.6	1.0	3.4

Inspection report

Date: 12/4/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7051 - 7050
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 363.50 '	Length Surveyed: 363.50 '

City: McFarland	Drainage Area:	Upstream MH: 7051
Street: E Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7050
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 12 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

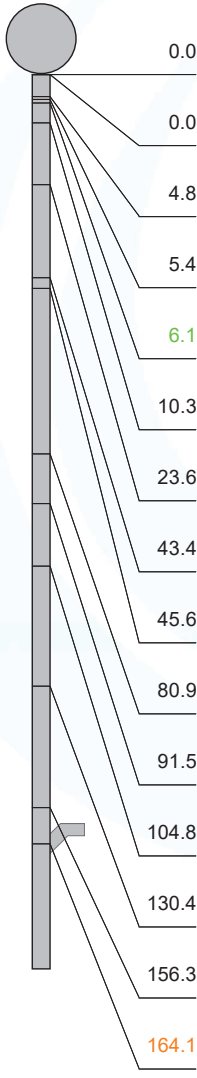
1:2744	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7051				
	0.0	MWL	Water Level, 20% of the vertical dimension				
	5.7	B	Broken from 12 o'clock to 4 o'clock, within 8 inch	S4			
	45.9	VC	Vermin Cockroach, within 8 inch	M1			
	67.6	MWL	Water Level, 10% of the vertical dimension				
	97.5	TF	Tap Factory Made at 9 o'clock, dia/height: 6inch, within 8 inch				
	163.2	MWL	Water Level, 20% of the vertical dimension				
	194.6	MWL	Water Level, 10% of the vertical dimension				
	216.9	MWL	Water Level, 20% of the vertical dimension				
	264.6	MWL	Water Level, 10% of the vertical dimension				
	286.9	TFC	Tap Factory Made Capped at 10 o'clock, dia/height: 6inch, within 8 inch				
	363.5	AMH	Manhole / 7050				
	7050						
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
4100	1100	4.0	1.0	5.0	4.0	1.0	2.5

Inspection report

Date: 12/4/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7052 - 7051
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 482.90 '	Length Surveyed: 482.90 '

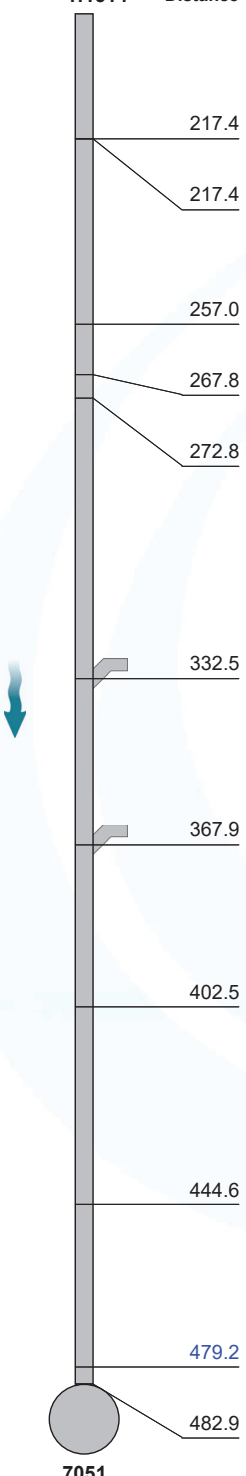
City: McFarland	Drainage Area:	Upstream MH: 7052
Street: E Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7051
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 12 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method: Cured in Place	Owner:	

Additional Info:

1:1514	Distance	Code	Observation	Grade
	7052			
	0.0	AMH	Manhole / 7052	
	0.0	MWL	Water Level, 25% of the vertical dimension	
	4.8	MWL	Water Level, 35% of the vertical dimension	
	5.4	LFZ	Lining Feature Other at 8 o'clock / Seam Tape peeling off	
	6.1	VC	Vermin Cockroach, within 8 inch	M1
	10.3	MWL	Water Level, 40% of the vertical dimension	
	23.6	MWL	Water Level, 30% of the vertical dimension	
	43.4	MWL	Water Level, 50% of the vertical dimension	
	45.6	LFZ	Lining Feature Other at 10 o'clock, within 8 inch / Seam Tape peeling off	
	80.9	MWL	Water Level, 65% of the vertical dimension	
	91.5	MWL	Water Level, 40% of the vertical dimension	
	104.8	MWL	Water Level, 30% of the vertical dimension	
	130.4	MWL	Water Level, 40% of the vertical dimension	
	156.3	MWL	Water Level, 30% of the vertical dimension	
	164.1	TFD	Tap Factory Made Defective at 9 o'clock, dia/height: 8inch, within 8 inch / FC	M3

Inspection report

Date: 12/4/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7052 - 7051
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 482.90 '	Length Surveyed: 482.90 '

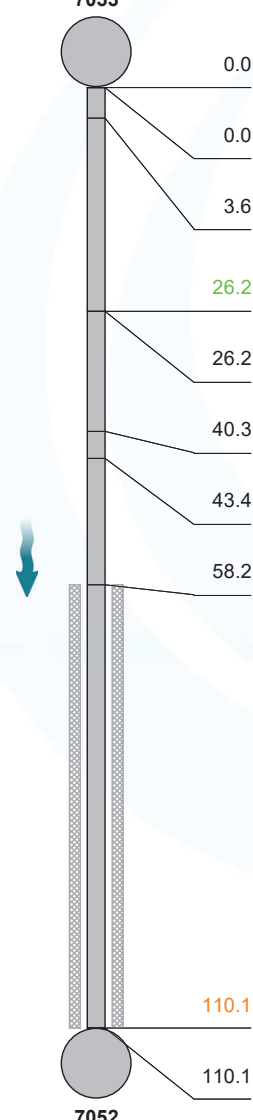
1:1514	Distance	Code	Observation	Grade			
	217.4	LFZ	Lining Feature Other at 10 o'clock / Seem tape peeling off				
	217.4	MWL	Water Level, 25% of the vertical dimension				
	257.0	LFZ	Lining Feature Other at 9 o'clock, within 8 inch / Seem tape peeling off				
	267.8	LFZ	Lining Feature Other from 8 o'clock to 9 o'clock, within 8 inch / Seem Tape peeling off				
	272.8	MWL	Water Level, 20% of the vertical dimension				
	332.5	TFC	Tap Factory Made Capped at 9 o'clock, dia/height: 4inch, within 8 inch				
	367.9	TF	Tap Factory Made at 10 o'clock, dia/height: 4inch, within 8 inch				
	402.5	MWL	Water Level, 30% of the vertical dimension				
	444.6	LFZ	Lining Feature Other at 11 o'clock, within 8 inch / Seem Tape peeling off				
	479.2	DAR	Deposits Attached Ragging, 10% of cross sectional area at 4 o'clock	M2			
	482.9	AMH	Manhole / 7051				
7051							
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
0000	3121	0.0	6.0	6.0	0.0	2.0	2.0

Inspection report

Date: 12/4/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7053 - 7052
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 110.10'	Length Surveyed: 110.10'

City: McFarland	Drainage Area:	Upstream MH: 7053
Street: E Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7052
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 12"	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method: Cured in Place	Owner:	

Additional Info:

1:831	Distance	Code	Observation	Grade			
	0.0	AMH	Manhole / 7053				
	0.0	MWL	Water Level, 55% of the vertical dimension				
	3.6	MWL	Water Level, 65% of the vertical dimension				
	26.2	VC	Vermin Cockroach, within 8 inch	M1			
	26.2	MWL	Water Level, 55% of the vertical dimension				
	40.3	MWL	Water Level, 40% of the vertical dimension				
	43.4	MWL	Water Level, 20% of the vertical dimension				
	58.2	S01	MWLS	Miscellaneous Water Level, Sag, 50% of the vertical dimension, Start			
	110.1	F01	MWLS	Miscellaneous Water Level, Sag, 50% of the vertical dimension, Finish	S3		
	110.1	AMH	Manhole / 7052				
QSR	QMR	SPR	MPR	OPR	SPRI	MPRI	OPRI
3A00	1100	30.0	1.0	31.0	3.0	1.0	2.8

Inspection report

Date: 12/4/2023	Work Order:	Weather:	Surveyed By: Grant Light	Certificate Number: U-0417-07007899	Pipe Segment Ref.: 7054 - 7053
Year laid:	Pre-cleaning: No Pre-Cleaning	Direction: Downstream	Pipe Joint Length:	Total Length: 290.70 '	Length Surveyed: 290.70 '

City: McFarland	Drainage Area:	Upstream MH: 7054
Street: E Perkins Ave	Media Label:	Up Rim to Invert: 0.0
Location Code:	Flow Control:	Downstream MH: 7053
Location Details:	Sheet Number:	Down Rim to Invert: 0.0
Pipe shape: Circular	Sewer Use: Sanitary Sewage Pipe	Total gallons used: 0.0
Pipe size: 12 "	Sewer Category: SEC	Joints passed: 0
Pipe material: Vitrified Clay Pipe	Purpose:	Joints failed: 0
Lining Method:	Owner:	

Additional Info:

1:2194	Distance	Code	Observation	Grade

APPENDIX C - PRELIMINARY PROJECT COST ESTIMATES

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Manhole and Wet Well Interior Coating Project
Preliminary Project Cost Estimate

Date Prepared: May 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS	\$ 5,000	\$ 5,000
2	Stormwater Management (WPCP)	1	LS	\$ 5,000	\$ 5,000
3	Project Safety & Traffic Control	1	LS	\$ 10,000	\$ 10,000
4	Apply Epoxy/Polyurathane Coating to Manhole Interior	12	EA	\$ 6,000	\$ 72,000
21	Apply Epoxy/Polyurathane Interior Coating to Hail & Fifth Lift Station Wet Well	1	LS	\$ 9,000	\$ 9,000
22	Apply Epoxy/Polyurathane Interior Coating to San Juan Lift Station Wet Well	1	LS	\$ 9,000	\$ 9,000
25	Perform Miscellaneous Work (T&M not to exceed)	-	T&M	\$ 5,000	\$ 5,000
TOTAL					\$ 115,000

Contingency: 25% \$ 28,750

Construction Total: \$ 144,000

Notes:

1. Based on the current level of "project" definition, this cost estimate is considered a Class 4 estimate with an accuracy range of -20% to +30%. See table below.
2. It is assumed that City staff will perform the minor engineering and inspection for this project.

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
Class 5	0% to 2%	Functional area, or concept screening	SF or m ² factoring, parametric models, judgment, or analogy	L: -20% to -30% H: +30% to +50%
Class 4	1% to 15%	or Schematic design or concept study	Parametric models, assembly driven models	L: -10% to -20% H: +20% to +30%
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%
Class 2	30% to 75%	Control or bid/tender, semi-detailed	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +15%
Class 1	65% to 100%	Check estimate or pre bid/tender, change order	Detailed unit cost with detailed take-off	L: -3% to -5% H: +3% to +10%

Table 1 – Cost Estimate Classification Matrix for Building and General Construction Industries

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Manhole and Lift Station Access Improvement Project
Preliminary Project Cost Estimate

Date Prepared: May 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS	\$ 5,000	\$ 5,000
2	Stormwater Management (WPCP)	1	LS	\$ 5,000	\$ 5,000
3	Project Safety & Traffic Control	1	LS	\$ 10,000	\$ 10,000
4	Replace Manhole Rim and Collar	9	EA	\$ 8,000	\$ 72,000
5	Replace Access Hatch at Hail & Fifth Lift Station	1	LS	\$ 20,000	\$ 20,000
6	Construct 6" Thick AC Paving	180	SF	\$ 40.00	\$ 7,200
25	Perform Miscellaneous Work (T&M not to exceed)	-	T&M	\$ 5,000	\$ 5,000
TOTAL					\$ 124,200

Contingency: 25% \$ 31,050

Construction Total: \$ 156,000

Notes:

1. Based on the current level of "project" definition, this cost estimate is considered a Class 4 estimate with an accuracy range of -20% to +30%. See table below.
2. It is assumed that City staff will perform the minor engineering and inspection for this project.

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
Class 5	0% to 2%	Functional area, or concept screening	SF or m ² factoring, parametric models, judgment, or analogy	L: -20% to -30% H: +30% to +50%
Class 4	1% to 15%	or Schematic design or concept study	Parametric models, assembly driven models	L: -10% to -20% H: +20% to +30%
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%
Class 2	30% to 75%	Control or bid/tender, semi-detailed	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +15%
Class 1	65% to 100%	Check estimate or pre bid/tender, change order	Detailed unit cost with detailed take-off	L: -3% to -5% H: +3% to +10%

Table 1 – Cost Estimate Classification Matrix for Building and General Construction Industries

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Lift Station Control Panel & Electrical Upgrade Project
Preliminary Project Cost Estimate

Date Prepared: May 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS	\$ 10,000	\$ 10,000
2	Project Safety & Traffic Control	1	LS	\$ 3,000	\$ 3,000
3	Replace Control Panel at Hail & Fifth Lift Station	1	LS	\$ 40,000	\$ 40,000
4	Replace Control Panel at San Juan Lift Station	1	LS	\$ 40,000	\$ 40,000
5	Install Pigtail Generator Connection at Hail & Fifth Lift Station	1	LS	\$ 3,500	\$ 3,500
6	Install Pigtail Generator Connection at San Juan Lift Station	1	LS	\$ 3,500	\$ 3,500
7	Install Security Lighting at Hail & Fifth LS	1	LS	\$ 20,000	\$ 20,000
8	Install Security Lighting at Hail & Garzoli LS	1	LS	\$ 20,000	\$ 20,000
9	Replace Deteriorated Wiring at Hail & Fifth LS	1	LS	\$ 10,000	\$ 10,000
10	Resolve Voltage and Communication Problem at Hail & Garzoli LS	1	LS	\$ 15,000	\$ 15,000
11	Perform SCADA System Modifications for Hail & Fifth LS	1	LS	\$ 7,500	\$ 7,500
12	Perform SCADA System Modifications for San Juan LS	1	LS	\$ 7,500	\$ 7,500
13	Perform Miscellaneous Work (T&M not to exceed)	-	T&M	\$ 10,000	\$ 10,000
TOTAL					\$ 190,000

Contingency: 25% \$ 47,500

Construction Total: \$ 238,000

Design/Engineering: 7.5% \$ 18,000

Construction Management & Inspection: 7.5% \$ 18,000

Grand Total (rounded): \$ 274,000

Notes:

1. Based on the current level of "project" definition, this cost estimate is considered a Class 4 estimate with an accuracy range of -20% to +30%. See table below.

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high estimates

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Lift Station Control Panel & Electrical Upgrade Project
Preliminary Project Cost Estimate

	expressed as % or complete definition			and high ranges at an 80% confidence interval
Class 5	0% to 2%	Functional area, or concept screening	SF or m ² factoring, parametric models, judgment, or analogy	L: -20% to -30% H: +30% to +50%
Class 4	1% to 15%	or Schematic design or concept study	Parametric models, assembly driven models	L: -10% to -20% H: +20% to +30%
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%
Class 2	30% to 75%	Control or bid/tender, semi-detailed	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +15%
Class 1	65% to 100%	Check estimate or pre bid/tender, change order	Detailed unit cost with detailed take-off	L: -3% to -5% H: +3% to +10%

Table 1 – Cost Estimate Classification Matrix for Building and General Construction Industries

Association for the Advancement of Cost Engineering (AACE)

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Lift Station Pump Replacement Project
Preliminary Project Cost Estimate

Date Prepared: May 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS	\$ 10,000	\$ 10,000
2	Project Safety & Traffic Control	1	LS	\$ 2,000	\$ 2,000
3	Replace Pump at Hail & Garzoli Lift Station	2	EA	\$ 30,000	\$ 60,000
4	Construct Electrical System Modifications at Hail & Garzoli LS	1	LS	\$ 8,000	\$ 8,000
5	Perform SCADA System Modifications for Hail & Garzoli LS	1	LS	\$ 5,000	\$ 5,000
6	Replace Pump at San Juan Lift Station	2	EA	\$ 30,000	\$ 60,000
7	Construct Electrical System Modifications at San Juan LS	1	LS	\$ 8,000	\$ 8,000
8	Perform SCADA System Modifications for San Juan LS	1	LS	\$ 5,000	\$ 5,000
9	Perform Miscellaneous Work (T&M not to exceed)	-	T&M	\$ 5,000	\$ 5,000
TOTAL					\$ 163,000

Contingency: 25% \$ 40,750

Construction Total: \$ 204,000

Design/Engineering: 7.5% \$ 16,000

Construction Management & Inspection: 7.5% \$ 16,000

Grand Total (rounded): \$ 236,000

Notes:

1. Based on the current level of "project" definition, this cost estimate is considered a Class 4 estimate with an accuracy range of -20% to +30%. See table below.

2. It is assumed that minor electrical and SCADA modifications are required for this project.

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
Class 5	0% to 2%	Functional area, or concept screening	SF or m ² factoring, parametric models, judgment, or analogy	L: -20% to -30% H: +30% to +50%
Class 4	1% to 15%	or Schematic design or concept study	Parametric models, assembly driven	L: -10% to -20% H: +20% to +30%

CITY OF MC FARLAND

Sewer Collection System Master Plan - Capital Improvement Program

Lift Station Pump Replacement Project

Preliminary Project Cost Estimate

		concept study	models	10% to 15%
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%
Class 2	30% to 75%	Control or bid/tender, semi-detailed	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +15%
Class 1	65% to 100%	Check estimate or pre bid/tender, change order	Detailed unit cost with detailed take-off	L: -3% to -5% H: +3% to +10%

Table 1 – Cost Estimate Classification Matrix for Building and General Construction Industries

Association for the Advancement of Cost Engineering (AACE)

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Manhole Replacement Project
Preliminary Project Cost Estimate

Date Prepared: May 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS	\$ 2,500	\$ 2,500
2	Stormwater Management (WPCP)	1	LS	\$ 3,500	\$ 3,500
3	Project Safety & Traffic Control	1	LS	\$ 3,500	\$ 3,500
4	Pothole Utilities	1	EA	\$ 1,500	\$ 1,500
5	Install Precast Concrete Manhole (5' Diameter)	1	EA	\$ 24,000	\$ 24,000
6	Construct 1.5-Sack Cement Slurry Backfill	12	CY	\$ 180	\$ 2,160
7	Construct 6" Thick AC Paving	100	SF	\$ 40.00	\$ 4,000
TOTAL					\$ 41,160

Contingency: 25% \$ 10,290

Construction Total: \$ 52,000

Notes:

1. Based on the current level of "project" definition, this cost estimate is considered a Class 4 estimate with an accuracy range of -20% to +30%. See table below.
2. It is assumed all trenches will be backfilled with 1.5-sack cement slurry.
3. It is assumed that City staff will perform the minor engineering and inspection for this project.

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
Class 5	0% to 2%	Functional area, or concept screening	SF or m ² factoring, parametric models, judgment, or analogy	L: -20% to -30% H: +30% to +50%
Class 4	1% to 15%	or Schematic design or concept study	Parametric models, assembly driven models	L: -10% to -20% H: +20% to +30%
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%
Class 2	30% to 75%	Control or bid/tender, semi-detailed	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +15%
Class 1	65% to 100%	Check estimate or pre bid/tender, change order	Detailed unit cost with detailed take-off	L: -3% to -5% H: +3% to +10%

Table 1 – Cost Estimate Classification Matrix for Building and General Construction Industries

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Manhole Replacement Project
Preliminary Project Cost Estimate

Association for the Advancement of Cost Engineering (AACE)

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Trunk Sewers CCTV Inspection
Preliminary Project Cost Estimate

Date Prepared: May 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	CCTV Video Inspection	30	Days	\$ 3,350	\$ 100,500
2	CCTV Inspection Report	1	LS	\$ 9,500	\$ 9,500
TOTAL					\$ 110,000

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Consolidated Headworks Trunk Sewer Line Project
Preliminary Project Cost Estimate

Date Prepared: May 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS	\$ 35,000	\$ 35,000
2	Stormwater Management (WPCP)	1	LS	\$ 8,000	\$ 8,000
3	Project Safety & Traffic Control	1	LS	\$ 7,000	\$ 7,000
4	Surveying & Construction Staking	1	LS	\$ 10,000	\$ 10,000
5	Pothole Utilities	3	EA	\$ 1,200	\$ 3,600
6	Bypass Pumping System	4	WKS	\$ 8,000	\$ 32,000
7	Install 42" PS-115 PVC Sewer	400	LF	\$ 780	\$ 312,000
8	Trench Shoring	430	LF	\$ 50	\$ 21,500
9	Install Gravel Bedding in Pipe Zone	220	CY	\$ 210	\$ 46,200
10	Install Precast Concrete Manhole (6' Diameter)	3	EA	\$ 27,000	\$ 81,000
11	Construct 1.5-Sack Cement Slurry Trench Backfill	340	CY	\$ 180	\$ 61,200
12	Connect to Headworks	1	LS	\$ 40,000	\$ 40,000
13	Construct Concrete Repairs	200	SF	\$ 65	\$ 13,000
14	Construct 6" Thick AC Paving	4,300	SF	\$ 15.00	\$ 64,500
15	Reset Kern County Survey Monument	1	EA	\$ 8,000	\$ 8,000
16	Install Traffic Striping & Pavement Legends	1	LS	\$ 5,000	\$ 5,000
18	Perform Miscellaneous Work (T&M not to exceed)	-	T&M	\$ 20,000	\$ 20,000
TOTAL					\$ 768,000

Contingency: 25% \$ 192,000

Construction Total: \$ 960,000

Design/Engineering: 6.0% \$ 58,000

Construction Management & Inspection: 7.0% \$ 68,000

Grand Total (rounded): \$ 1,086,000

Notes:

1. Based on the current level of "project" definition, this cost estimate is considered a Class 4 estimate with an accuracy range of -20% to +30%. See table below.

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Consolidated Headworks Trunk Sewer Line Project
Preliminary Project Cost Estimate

2. It is assumed all trenches will be backfilled with 1.5-sack cement slurry.

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
Class 5	0% to 2%	Functional area, or concept screening	SF or m ² factoring, parametric models, judgment, or analogy	L: -20% to -30% H: +30% to +50%
Class 4	1% to 15%	or Schematic design or concept study	Parametric models, assembly driven models	L: -10% to -20% H: +20% to +30%
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%
Class 2	30% to 75%	Control or bid/tender, semi-detailed	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +15%
Class 1	65% to 100%	Check estimate or pre bid/tender, change order	Detailed unit cost with detailed take-off	L: -3% to -5% H: +3% to +10%

Table 1 – Cost Estimate Classification Matrix for Building and General Construction Industries

Association for the Advancement of Cost Engineering (AACE)

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Perkins Trunk Sewer Line Upgrade Project
Preliminary Project Cost Estimate

Date Prepared: May 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS	\$ 250,000	\$ 250,000
2	Stormwater Management (WPCP)	1	LS	\$ 25,000	\$ 25,000
3	Project Safety & Traffic Control	1	LS	\$ 25,000	\$ 25,000
4	Surveying & Construction Staking	1	LS	\$ 20,000	\$ 20,000
5	Pothole Utilities	5	EA	\$ 1,200	\$ 6,000
6	Bypass Pumping System	12	WKS	\$ 8,000	\$ 96,000
7	Install 36" PS-115 PVC Sewer	5,767	LF	\$ 625	\$ 3,604,375
8	Trench Shoring	5,787	LF	\$ 40	\$ 231,480
9	Install Gravel Bedding in Pipe Zone	1,570	CY	\$ 190	\$ 298,300
10	Install Precast Concrete Manhole (5' Diameter)	9	EA	\$ 24,000	\$ 216,000
11	Construct 1.5-Sack Cement Slurry Trench Backfill	3,430	CY	\$ 165	\$ 565,950
12	Connect to Downstream Manhole	1	LS	\$ 25,000	\$ 25,000
13	Construct Concrete Repairs	200	SF	\$ 65	\$ 13,000
14	Construct 6" Thick AC Paving	34,800	SF	\$ 13.50	\$ 469,800
15	Reset Kern County Survey Monument	2	EA	\$ 8,000	\$ 16,000
16	Install Traffic Striping & Pavement Legends	1	LS	\$ 15,000	\$ 15,000
17	Perform Miscellaneous Work (T&M not to exceed)	-	T&M	\$ 30,000	\$ 30,000
TOTAL					\$ 5,906,905

Contingency: 25% \$ 1,476,726

Construction Total: \$ 7,384,000

Design/Engineering: 5.5% \$ 407,000

Construction Management & Inspection: 6.5% \$ 480,000

Grand Total (rounded): \$ 8,271,000

Notes:

1. Based on the current level of "project" definition, this cost estimate is considered a Class 4 estimate with an accuracy range of -20% to +30%. See table below.

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Perkins Trunk Sewer Line Upgrade Project
Preliminary Project Cost Estimate

2. It is assumed all trenches will be backfilled with 1.5-sack cement slurry.

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
Class 5	0% to 2%	Functional area, or concept screening	SF or m ² factoring, parametric models, judgment, or analogy	L: -20% to -30% H: +30% to +50%
Class 4	1% to 15%	or Schematic design or concept study	Parametric models, assembly driven models	L: -10% to -20% H: +20% to +30%
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%
Class 2	30% to 75%	Control or bid/tender, semi-detailed	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +15%
Class 1	65% to 100%	Check estimate or pre bid/tender, change order	Detailed unit cost with detailed take-off	L: -3% to -5% H: +3% to +10%

Table 1 – Cost Estimate Classification Matrix for Building and General Construction Industries

Association for the Advancement of Cost Engineering (AACE)

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Stradley-Taylor Trunk Sewer (Middle Segments) Project
Preliminary Project Cost Estimate

Date Prepared: June 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS	\$ 750,000	\$ 750,000
2	Stormwater Management (WPCP)	1	LS	\$ 30,000	\$ 30,000
3	Project Safety & Traffic Control	1	LS	\$ 30,000	\$ 30,000
4	Surveying & Construction Staking	1	LS	\$ 25,000	\$ 25,000
5	Pothole Utilities	7	EA	\$ 1,200	\$ 8,400
6	Install 30" PS-115 PVC Sewer	18,778	LF	\$ 525	\$ 9,858,450
7	Trench Shoring	18,798	LF	\$ 40	\$ 751,920
8	Install Gravel Bedding in Pipe Zone	4,240	CY	\$ 190	\$ 805,600
9	Install Precast Concrete Manhole (5' Diameter)	29	EA	\$ 24,000	\$ 696,000
10	Construct 1.5-Sack Cement Slurry Trench Backfill	9,260	CY	\$ 165	\$ 1,527,900
11	Connect to Downstream Manhole	1	LS	\$ 25,000	\$ 25,000
12	Construct Concrete Repairs	400	SF	\$ 65	\$ 26,000
13	Construct 6" Thick AC Paving	93,900	SF	\$ 13.50	\$ 1,267,650
14	Reset Kern County Survey Monument	3	EA	\$ 8,000	\$ 24,000
15	Install Traffic Striping & Pavement Legends	1	LS	\$ 25,000	\$ 25,000
16	Perform Miscellaneous Work (T&M not to exceed)	-	T&M	\$ 30,000	\$ 30,000
TOTAL					\$ 15,880,920

Contingency: 25% \$ 3,970,230

Construction Total: \$ 19,852,000

Design/Engineering: 5.5% \$ 1,092,000

Construction Management & Inspection: 6.5% \$ 1,291,000

Grand Total (rounded): \$ 22,235,000

Notes:

1. Based on the current level of "project" definition, this cost estimate is considered a Class 4 estimate with an accuracy range of -20% to +30%. See table below.

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Stradley-Taylor Trunk Sewer (Middle Segments) Project
Preliminary Project Cost Estimate

2. It is assumed all trenches will be backfilled with 1.5-sack cement slurry.

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
Class 5	0% to 2%	Functional area, or concept screening	SF or m ² factoring, parametric models, judgment, or analogy	L: -20% to -30% H: +30% to +50%
Class 4	1% to 15%	or Schematic design or concept study	Parametric models, assembly driven models	L: -10% to -20% H: +20% to +30%
Class 3	10% to 40%	Design development, budget authorization, feasibility	Semi-detailed unit costs with assembly level line items	L: -5% to -15% H: +10% to +20%
Class 2	30% to 75%	Control or bid/tender, semi-detailed	Detailed unit cost with forced detailed take-off	L: -5% to -10% H: +5% to +15%
Class 1	65% to 100%	Check estimate or pre bid/tender, change order	Detailed unit cost with detailed take-off	L: -3% to -5% H: +3% to +10%

Table 1 – Cost Estimate Classification Matrix for Building and General Construction Industries

Association for the Advancement of Cost Engineering (AACE)

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Stradley-Taylor Trunk Sewer (Upstream Segments) Project
Preliminary Project Cost Estimate

Date Prepared: June 2024

BID ITEM NO.	DESCRIPTION	Bid Quantity	Unit of Measure	Unit Price	Total
1	Mobilization	1	LS	\$ 250,000	\$ 250,000
2	Stormwater Management (WPCP)	1	LS	\$ 30,000	\$ 30,000
3	Project Safety & Traffic Control	1	LS	\$ 30,000	\$ 30,000
4	Surveying & Construction Staking	1	LS	\$ 25,000	\$ 25,000
5	Pothole Utilities	7	EA	\$ 1,200	\$ 8,400
6	Install 18" PS-115 PVC Sewer	12,446	LF	\$ 315	\$ 3,920,490
7	Install 21" PS-115 PVC Sewer	6,477	LF	\$ 365	\$ 2,364,105
8	Install 30" PS-115 PVC Sewer	2,581	LF	\$ 525	\$ 1,355,025
9	Trench Shoring	21,534	LF	\$ 40	\$ 861,360
10	Install Gravel Bedding in Pipe Zone	3,400	CY	\$ 190	\$ 646,000
11	Install Precast Concrete Manhole (5' Diameter)	33	EA	\$ 24,000	\$ 792,000
12	Construct 1.5-Sack Cement Slurry Trench Backfill	7,420	CY	\$ 165	\$ 1,224,300
13	Connect to Downstream Manhole	3	EA	\$ 25,000	\$ 75,000
14	Construct Concrete Repairs	400	SF	\$ 65	\$ 26,000
15	Construct 6" Thick AC Paving	75,300	SF	\$ 13.50	\$ 1,016,550
16	Reset Kern County Survey Monument	3	EA	\$ 8,000	\$ 24,000
17	Install Traffic Striping & Pavement Legends	1	LS	\$ 25,000	\$ 25,000
18	Perform Miscellaneous Work (T&M not to exceed)	-	T&M	\$ 30,000	\$ 30,000
TOTAL					\$ 12,703,230

Contingency: 25% \$ 3,175,808

Construction Total: \$ 15,880,000

Design/Engineering: 5.5% \$ 874,000

Construction Management & Inspection: 6.5% \$ 1,033,000

Grand Total (rounded): \$ 17,787,000

Notes:

CITY OF MC FARLAND
Sewer Collection System Master Plan - Capital Improvement Program
Stradley-Taylor Trunk Sewer (Upstream Segments) Project
Preliminary Project Cost Estimate

1. Based on the current level of "project" definition, this cost estimate is considered a Class 4 estimate with an accuracy range of -20% to +30%. See table below.
2. It is assumed all trenches will be backfilled with 1.5-sack cement slurry.

ESTIMATE CLASS	Primary Characteristic	Secondary Characteristic		
	MATURITY LEVEL OF PROJECT DEFINITION DELIVERABLES Expressed as % of complete definition	END USAGE Typical purpose of estimate	METHODOLOGY Typical estimating method	EXPECTED ACCURACY RANGE Typical variation in low and high ranges at an 80% confidence interval
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Table 1 – Cost Estimate Classification Matrix for Building and General Construction Industries

Association for the Advancement of Cost Engineering (AACE)



City of McFarland

City Council Meeting

STAFF REPORT

Agenda Item No. 9.
Section: PUBLIC HEARINGS
Meeting Date: August 8, 2024

TO: Honorable Mayor and Council Members

FROM: Diego Viramontes, City Manager
Paul Saldaña , Community Development Director

SUBJECT: Introduce, by title only Ordinance 11-2024, AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MCFARLAND AMENDING CHAPTER 5.04 OF THE MCFARLAND MUNICIPAL CODE RELATING TO BUSINESS LICENSES

SUMMARY:

Chapter 5.04 of the McFarland Municipal Code regulates the issuance of business taxes and licenses within the City limits. There are currently uses within the City for which a business license rate is not defined other than the general annual gross receipts.

The proposed ordinance would provide for an additional category called "animal confinement/breeding/raising" which would provide for an annual fee of \$2,000 per acre for the business license. This fee is preferable than a "per confined animal" or annual gross receipts since it would be difficult for the City to verify these options, while an acre measurement can be adequately audited.

FINANCIAL IMPACT:

An increase of \$146,000 in general fund revenue is estimated from the modifications to the business license fee structure.

RECOMMENDATION:

City Council waive full reading and introduce by title only Ordinance 11-2024 AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MCFARLAND AMENDING CHAPTER 5.04 OF THE MUNICIPAL CODE RELATING TO BUSINESS LICENSES

ATTACHMENTS:

None

ORDINANCE NO. 11-2024

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF MCFARLAND AMENDING CHAPTER 5.04 OF THE MUNICIPAL CODE RELATING TO BUSINESS LICENSES

Section 1. Recitals

WHEREAS, Article XI section 7 of the California Constitution provides authority to the City of McFarland to adopt ordinances and regulations for businesses transacted in the City, and

WHEREAS, Chapter 5.04 of the McFarland Municipal Code regulates business license and business license fees, and

WHEREAS, the City currently has no fees identified for businesses that operate animal confinement, breeding, and raising operations.

NOW THEREFORE, THE CITY COUNCIL OF THE CITY OF MCFARLAND DOES ORDAIN AS FOLLOWS:

Section 1. The following is added to Section A of Chapter 5.04.140 as follows:

Business Type	Annually/Daily/Per Event/ Unit Tax Amount
Animal Confinement/Breeding/Raising \$1,000 per acre	

Section 7. **Notice.** The City Clerk shall certify to the passage and adoption of this ordinance and shall cause this Ordinance to be posted within 15 days after its passage, in accordance with Section 36933 of the Government Code.

Section 8. **Severability.** If any section, subsection, sentence, clause, phrase, or word of this Ordinance is, for any reason, deemed or held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, or preempted by legislative enactment, such decision or legislation shall not affect the validity of the remaining portions of this Ordinance. The City Council of the City of McFarland hereby declares that it would have adopted this Ordinance and each section, subsection, sentence, clause, phrase, or word thereof, regardless of the fact that any one or more sections, subsections, clauses, phrases, or word might subsequently be declared invalid or unconstitutional or preempted by subsequent legislation.

Section 9. **Effective Date.** This Ordinance shall take effect thirty days after its adoption pursuant to California Government Code section 36937.

Section 10. **Certification; Publication.** The City Clerk shall certify to the passage and adoption of this Ordinance and shall cause the same to be published or posted according to law.

INTRODUCED, at a regular meeting of the City Council of the City of McFarland, California on 8/8/2024, by the following vote:

PASSED AND ADOPTED at a regular meeting of the City Council of the City of McFarland on by the following vote:

	Aye	Nae	Abstain	Absent
Saul Ayon				
Ricardo Cano				
Amador Ayon				
Anita Gonzalez				
María T. Pérez				

Saul Ayon, Mayor

I hereby certify that the foregoing Ordinance was duly and regularly adopted by the City Council of the City of McFarland by a regular meeting thereof held on August 8, 2024.

ATTEST:

Paul M. Saldana, Interim City Clerk